SONY

525-HD UPCONVERTER BOARD

HKPF-1125

HDVS

ISR Interactive Status Reporting

MAINTENANCE MANUAL

1st Edition

Serial No. 10001 and Higher

⚠警告

このマニュアルは，サービス専用です。
お客様が，このマニュアルに記載された設置や保守，点検，修理などを行うと感電や火災，人身事故につながることがあります。
危険をさけるため，サービストレーニングを受けた技術者のみご使用ください。

⚠WARNING

This manual is intended for qualified service personnel only.
To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

⚠WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.
Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

⚠AVERTISSEMENT

Ce manual est destiné uniquement aux personnes compétentes en charge de l’entretien. Afin de réduire les risques de décharge électrique, d’incendie ou de blessure n’effectuer que les réparations indiquées dans le mode d’emploi à moins d’être qualifié pour en effectuer d’autres. Pour toute réparation faire appel à une personne compétente uniquement.

Table of Contents

Manual Structure

Purpose of this manual ..... 3 (E)
Contents ..... 3 (E)
Related manual ..... 3 (E)

1. Attachment

1-1. Supplied Accessories ..... 1-1 (E)
1-2. Internal Switch Settings ..... 1-1 (E)
1-3. Board Attachment ..... 1-6 (E)
1-4. Names and Functions of Connectors ..... 1-9 (E)
1-4-1. Names and Functions of Connectors ..... 1-9 (E)
1-4-2. Connectors and Cables for Connection ..... 1-10 (E)
1-5. Names and Functions of LEDs ..... 1-11 (E)

2. Service Overview

2-1. Notes on Repair Parts ..... 2-1 (E)
2-2. Replacement of Fuse ..... 2-1 (E)
2-3. Rewriting the CPU Program ..... 2-2 (E)
2-4. Notes during Replacement of Board and Parts on Board ..... 2-4 (E)
2-5. Circuit Description ..... 2-4 (E)
2-6. ISR (Interactive Status Reporting) ..... 2-5 (E)

3. Test Mode (Self-diagnosis)

4. Electrical Alignment

4-1. Equipment Required ..... 4-1 (E)
4-2. Preparation ..... 4-1 (E)
4-3. Free Run 74 MHz Frequency Adjustment (59.94) ..... 4-2 (E)
4-4. +1.2 V Power Voltage Adjustment ..... 4-2 (E)
4-5. 27 MHz & 14.32 MHz Free Run Frequency Adjustment ..... 4-3 (E)
4-6. Composite Decoder Block Pedestal Adjustment ..... 4-3 (E)
4-7. Composite Decoder Block Input Level Adjustment ..... 4-4 (E)

5. Spare Parts

5-1. Electrical Parts List 5-1

6. Semiconductor Pin Assignments

7. Block Diagram

Overall 7-1

8. Schematic Diagrams

DIF-79 8-1
DPR-117 8-2

9. Board Layouts

DIF-79 9-1
DPR-117 9-2

http://getMANUAL.com

Manual Structure

Purpose of this manual

This manual is the maintenance manual of 525-HD UPCONVERTER BOARD HKPF-1125.
This manual is intended for use by service engineers and is provided the information required for the attachment, the maintenance information and the information that premise the service based the component parts.

Contents

This manual is organized by the following sections.

Section 1 Attachment
This section describes the setting of board switches, the board attachment, the connectors and cables for connection, and the name and functions of LEDs.

Section 2 Service Overview
This section describes the notes during service activities, fuse replacement, rewriting the CPU program, and the ISR (Interactive Status Reporting).

Section 3 Test Mode (Self-diagnosis)
This section describes the test mode (self-diagnosis).

Section 4 Electrical Alignment
This section describes the general information for electrical adjustment and the adjustment procedures of this unit.

Section 5 Spare Parts
This section describes the spare parts.

Section 6 Semiconductor Pin Assignments
This section describes the pin assignments of semiconductor.

Section 7 Block Diagram
This section describes the overall block diagram.

Section 8 Schematic Diagrams
This section describes the schematic diagrams for mounted circuit boards.

Section 9 Board Layouts
This section describes the board layouts for mounted circuit boards.

Related manual

The following manual is prepared for HKPF-1125.

- **Operation Manual (Supplied with HKPF-1125)**
  This manual describes the notes on the operating, and the locations and functions of parts and controls of HKPF-1125.

Section 1
Attachment

1-1. Supplied Accessories

The supplied accessories of HKPF-1125 are as follows.

- Label : 1
- Maintenance manual : 1
- Operation manual : 1

1-2. Internal Switch Settings

Explains the function of switches on the DPR-117 board and each factory-set position as follows. Set the switches as necessary at installation.

Operation Setting Switches

S1: INPUT SEL (board panel)

Selects the signal input to the connector panel, and selected signal is converted as HD SDI signal.

D1 SDI: Converts a signal that is input to the D1/D2 SDI connector of VIDEO IN as D1 signal.

D2 SDI: Converts a signal that is input to the D1/D2 SDI connector of VIDEO IN as D2 signal.

ANALOG: Converts an analog composite signal that is input to the ANALOG connector of VIDEO IN.

Factory-set position: D1 SDI

S2: REF SEL (board panel)

Selects the reference timing of HD SDI output signal when S908 is set to REF LOCK position.

Note

Within sync signal phase ±3 msec against input video siganal.

INPUT: Signal is synchronized with the video signal that is input to the VIDEO IN connector, then it is output.

EXT1125: Signal is synchronized with the external sync signal (1125 Sync), then it is output.

EXT525: Signal is synchronized with the external sync signal (525 Sync), then it is output.

Factory-set position: INPUT

S3: CONVERSION (board panel)

Selects the display for converting the SD (525) to HD (1125).

ADAPTIVE: Field and Frame will be used accordingly.

FIELD: Field display will be used.

FRAME: Frame display will be used.

Factory-set position: ADAPTIVE

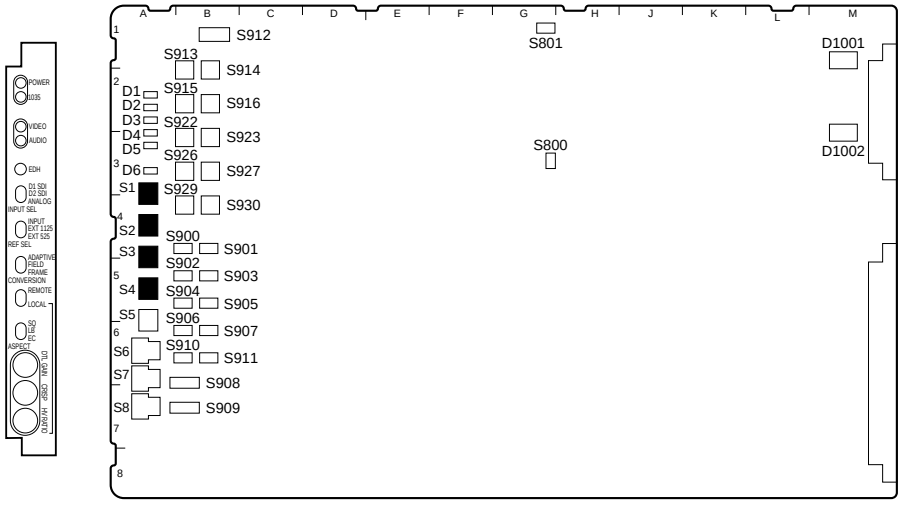
S4: REMOTE/LOCAL (board panel)

Selects whether controls such as detail is exercised by the unit, or by remote control.

REMOTE: Exercised by a digital video controller HKDV-503 or GPI (General Purpose Interface)

LOCAL: Exercised by the internal switches shown in the table (on the DPR-117 board)

Factory-set position: REMOTE



DPR-117 BOARD (A SIDE)

The following functions can be controlled by the digital video controller HKDV-503 when the switch S4 is set to “REMOTE”. When remotely controlled, the following switch settings are regarded as unity (preset) values of the unit. When controlling another functions which are not controllable by the HKDV-503, the switch corresponding to that function on the DPR-117 board is always active.

Function		Switch/DPR-117 board
Detail	GAIN	S6
	CRISPENING	S7
	LIMIT (POSI/NEGA)	S922, S923
	FREQUENCY	S926
	H/V RATIO	S8
	LEVEL DEPEND	S927
Gamma	GAMMA CONT	S929
Aspect	MODE SEL	S5
	EC POSI	S904, S913
	LB POSI	S914
Video process	MASTER	none
	Y	none
	Pb	none
	Pr	none
	SET UP	none
	SYNC PHASE	none
	FINE	none

Each video process setting value controlled by the HKDV-503 become effective in REMOTE mode. In LOCAL mode, gain of each setting value become “1.”

S903: REMOTE 503/GPI

Selects the way for the unit to be remote-controlled when the switch S4 is set to “REMOTE”.

503: By a digital video controller HKDV-503

GPI: By GPI (General Purpose Interface)

Factory-set position: 503

S908: OUT DLY

Selects the reference timing of HD SDI output signal.

REF LOCK: Signal is synchronized with the reference timing that is selected by S2, then it is output after delayed for one frame.

ADJ: Adjusts the vertical phase of output signal against the input video signal in a unit of horizontal duration. Amount of delay can be set by S910, S915 and S916. From 660 H to 1171 H (HD line) can be set.

MIN: The signal is output after delaying for 660 H (HD line) against the input video signal.

Factory-set position: REF LOCK

S910: DELAY COARSE 1

S915: DELAY COARSE 2

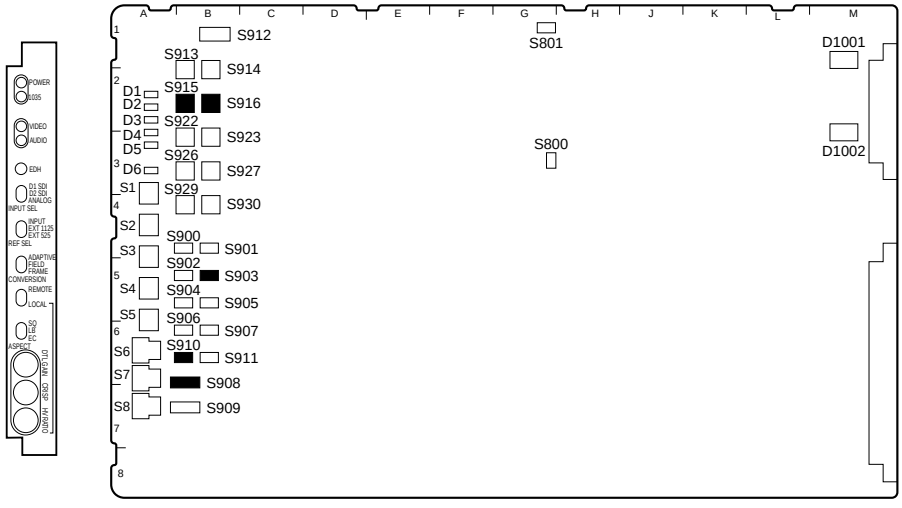
S916: DELAY FINE

Set the vertical phase of HD SDI output signal in a unit of horizontal duration when S908 is set to “ADJ” position. Since 9-bit (binary) is assigned for controlling the amount of delay, bit 8 is set by S910, bits 7 to 4 are set by S915, and bits 3 to 0 are set by S916. Amount of delay is determined by the switch set value of 1171.

Factory-set position: S910 → 0
S915 → 8
S916 → 8

Amount of delay becomes as follows:

$1171 - (0 \times 2^8 + 8 \times 2^4 + 8 \times 2^0) = 1035$H delay



DPR-117 BOARD (A SIDE)

Signal Format Selection Switches

S905: LINE 1080/1035
S905 selects the number of lines of the HD SDI output either 1080 or 1035.
Factory-set position: 1080

Detail Adjustment Switches

The switches explained here can be used to perform various detail compensations. Prior to the switch setting, make sure the switch S906 is set to ON.

S906: DETAIL ON/OFF
Turns on and off the detail function. When this switch is set to ON, the following switches become active and various detail compensations (such as detail level adjustment) can be arranged to improve the resolution.
Factory-set position: ON

S6: DETAIL GAIN (board panel)
The detail signal level can be varied in 16 steps.
7 → 0: Decrease the detail level. (When "0," the detail to be decreased becomes the maximum level.)
8: No detail affected.
9 → F: Increase the detail level (When "F," the detail to be increased becomes the maximum level.)
Factory-set position: 8

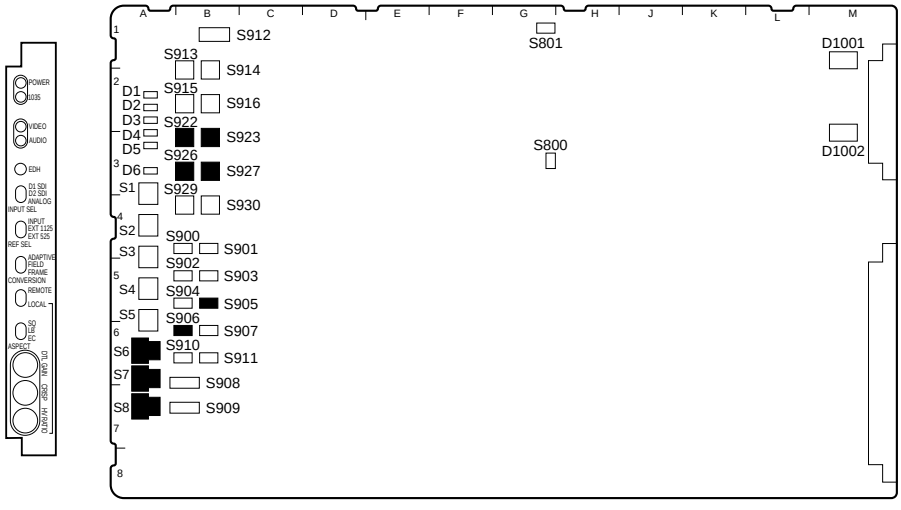
S7: CRISP (board panel)
Adjusts the level at which the detail signal is crisped in 16 steps.
Factory-set position: 8

S8: H/V RATIO (board panel)
Adjusts the mix ratio of H and V detail signal in 7 steps. (Adjust in the range from 5 to B. Other settings will be ignored. The higher the value you set, the larger the vertical detail.)
Factory-set position: 8

S922: LIMIT POSITIVE
S923: LIMIT NEGATIVE
S922 adjusts the clipping level against the higher detail signal at the maximum level in 16 steps.
S923 adjusts the clipping level against the lower detail signal at the minimum level in 16 steps.
Factory-set position: 8

S926: FREQ
Adjusts the boost frequency for H detail signal in 4 steps. (Adjusts in the range from 6 to 9. Other settings will be ignored.)
Factory-set position: 8

S927: LEVEL DEPEND
Adjusts the level to control the detail signal at lower signal level in 16 steps.
Factory-set position: 8

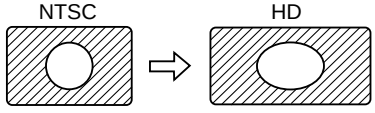
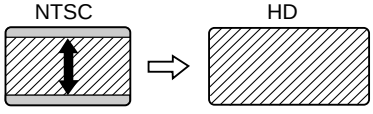
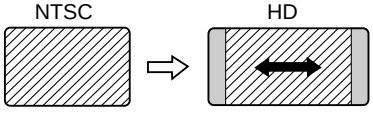


DPR-117 BOARD (A SIDE)

Aspect Ratio Setting Switches

The switches explained here are used to select the aspect ratio for the output signals or to make various mode settings. Settings of S5, S904, S913 and S914, however, are activated only when the switch S4 (above-mentioned) is set to “LOCAL”.

S5: ASPECT (board panel)
Selects the aspect ratio from the next 3 modes.
SQ (SQUEEZE)
LB (LETTER BOX)
EC (EDGE CROP)
Factory-set position: EC

SQUEEZE	 The NTSC image (aspect ratio 4:3) is expanded horizontally to fit the HDTV image (aspect ratio 16:9).
LETTER BOX	 The sides of the NTSC image are cropped, reducing its width by 1/4.
EDGE CROP	 The NTSC image appears in a slot, with its aspect ratio unchanged at 4:3.

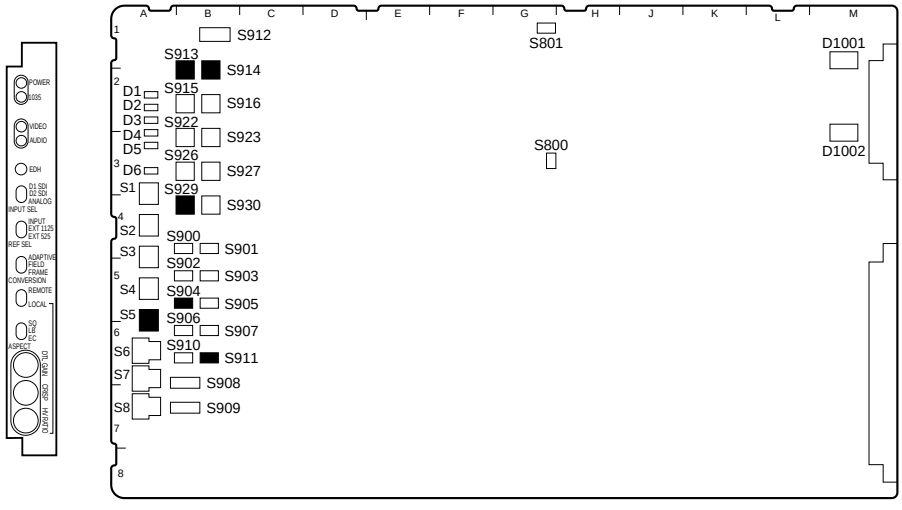
S904: EC POSI CENTER/VAR
Selects the horizontal display position of the screen after the conversion when S5 is set to “EC”.
CENTER: Displays at the center of HD screen
VAR (VARIABLE): The position where the picture is displayed can be varied by using S913
Factory-set position: CENTER

S913: EC-POSIITON FINE
Horizontal display position can be varied when S904 is set to “VAR”.
Factory-set position: 8

S914: LB POSI
Selects the beginning of conversion position (vertical direction) when “LB” is selected by S5 or by remote control.
Factory-set position: 8

Gamma Adjustment Switches

S911: GAMMA ON/OFF
S929: GAMMA
S911 turns on and off the gamma correction function. When this switch is set to ON, S929 is activated to adjust the gamma correction curve in 16 steps.
Factory-set position: S911 → ON
S929 → 8



DPR-117 BOARD (A SIDE)

Other switches

S800: RESET

Initializes the HKPF-1125. There is no use in usual operation.

S801: CPU Write Setting

Set this switch to R803 side when writing the program inside the CPU.

R803 side: Writing the CPU program

L900 side: Usual position

S912: Test Mode Designation DIP Switch

This switch (8-bit DIP switch) is used when diagnosing the board operation. There is no use in usual operation. The eight numbers on the switch (left to right) correspond to bits 1 thorough 8, and OFF is facing the front and ON is the other side. Usually, set all bit to OFF.

S912-1 to S912-4: Not in use

Set to OFF.

S912-5: S-P Converter Free-Run

Set to ON when adjusting the free-run frequency of SDI input.

ON: When adjusting the free-run frequency of SDI input

OFF: Usual position

S912-6: Not in use

Set to OFF.

S912-7: Test SG OFF/ON

The test signal that is generated by the circuit inside the unit can be output.

Test SG signal can be selected by the setting of switch S930.

ON: SG output

OFF: Usual position

S912-8: DIAG ON

Select this position when self-diagnosing the board operation. When performing the self-diagnosis function, first set this switch to ON position then turn ON the power.

ON: When the power is turned to ON, the self-diagnosis function will be started.

OFF: Usual position

S930: SIGNAL SEL

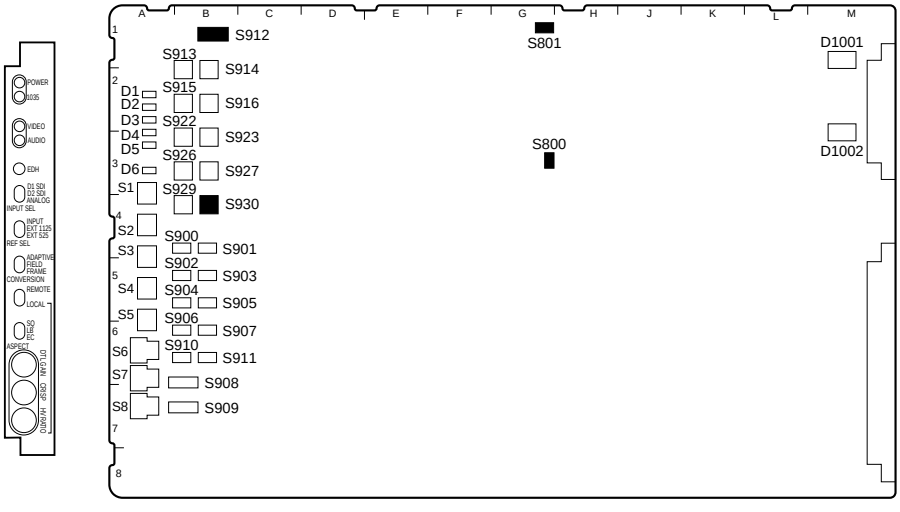
When S912-7 is ON, select the test SG signal.

0: Cross Hatch
1: Dot
2: Box 1
3: Box 2
4: Vertical Ramp 1
5: Vertical Ramp 2
6: 100 % White
7: Gray
8: 100 % Color Bars
9: 75 % Color Bars
A: 100 % Vertical Color Bars
B: 75 % Vertical Color Bars
C: Ramp 1
D: Ramp 2
E: 10-step
F: 5-step

Factory-set position: 8

Set the following switches to OFF (board panel side)

S900
S901
S902
S907
S909



DPR-117 BOARD (A SIDE)

1-3. Board Attachment

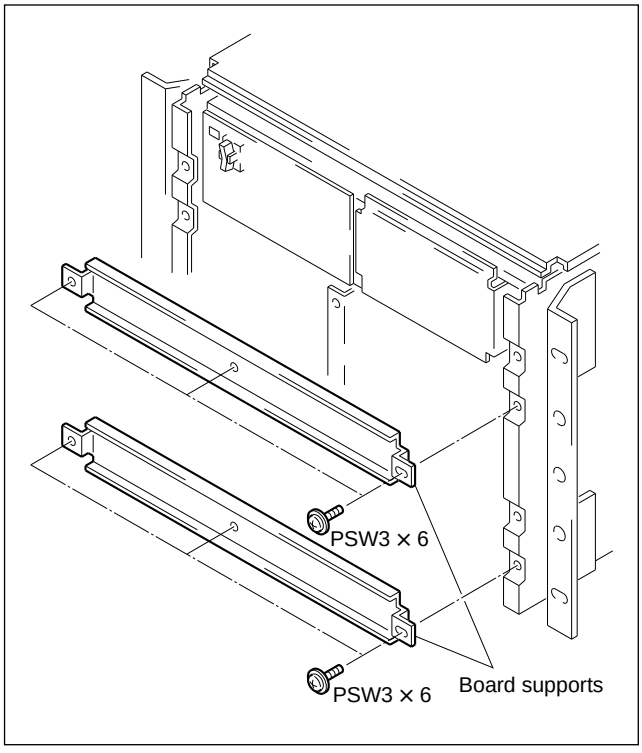
- This section is described how to attach the board in PFV-HD300. For how to attach it in models other than PFV-HD300, refer to the manual supplied for each model.
- Insert the board in any blank slot of PFV-HD300.

Note

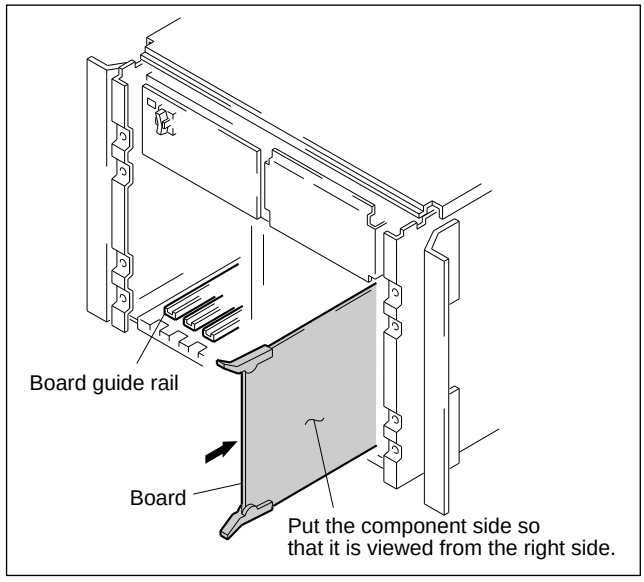
Do not insert the board in the slot No. 14.
The maximum two HKPF-1125s can be attached in the PFV-HD50A.
The maximum seven HKPF-1125s can be attached in the PFV-HD300 when the only HFPF-1125 will be used.

Front panel

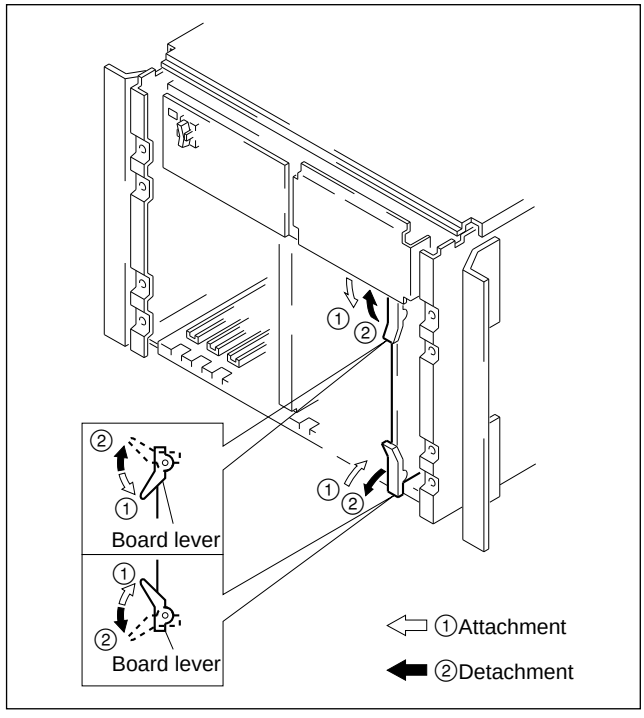
1. Loosen the four screws (with stopper) and detach the front panel.
2. Unscrew the six screws and detach the board supports.



3. Insert the board along the board guide rail.



4. Insert the board in the slot as far as it will go and close the two board levers in the directions of arrows ①.



5. Put the supplied label onto the board lever.
6. Attach the board supports.
7. Attach the front panel.

Note

When detaching the board, pull out the board toward you while pushing the two board levers in the directions of arrows ②.

Rear panel

Notes

1. Save the detached blank panel for later use.
2. Be sure to attach the IFB shield and their parts attached to both sides of the blank panel, since they are the parts that use spurious emission.
3. In order to maintain the cooling effect for PFV-HD300, do not leave the slot open. Be sure to attach the blank panel to an empty slot.

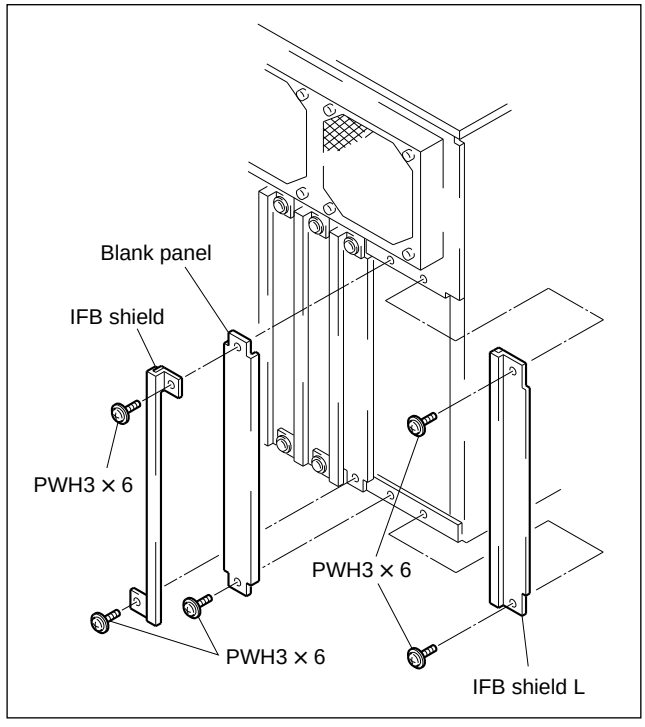
The connector panel attachment methods are divided into three types depending on the slot number.

<Type 1> For slot No. 1
<Type 2> For slot Nos. 2 to 6, 9 to 14
<Type 3> For slot Nos. 7 and 8

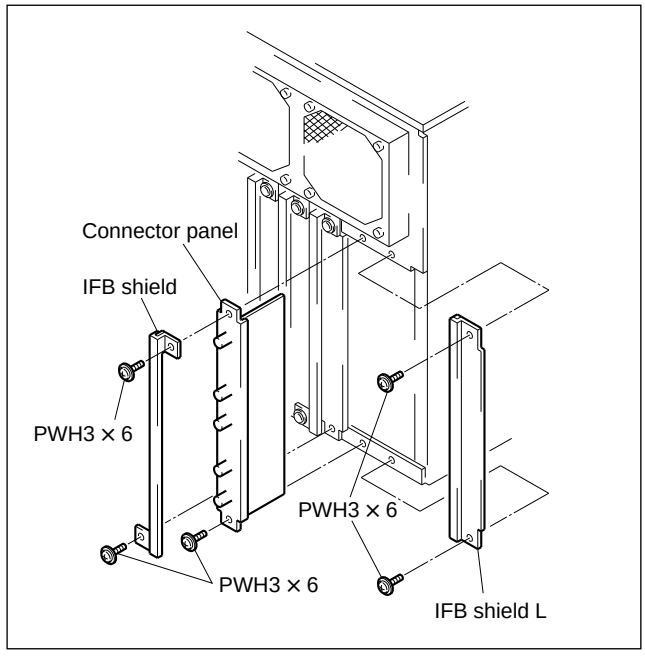
The attachment methods for each type are explained below.

<Type 1>

1. Remove the five screws, and remove the IFB shield L, IFB shield and blank panel.

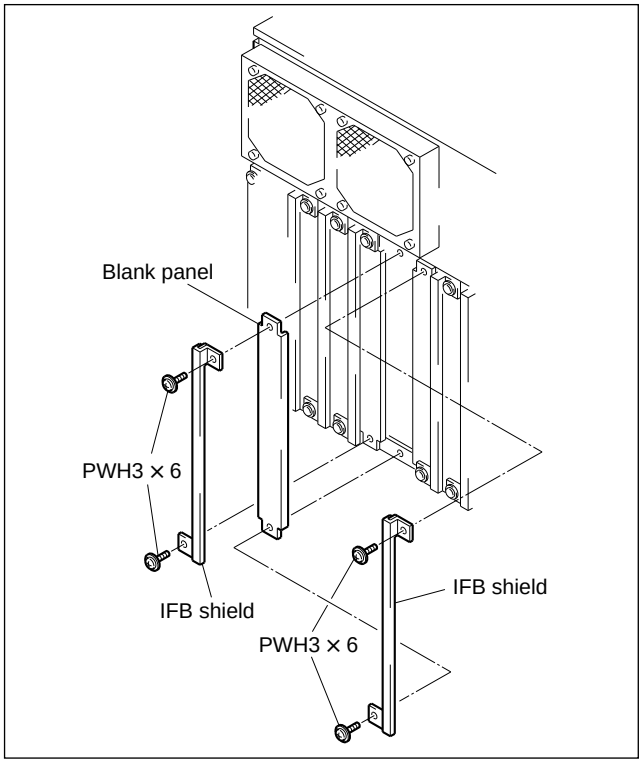


2. Insert the connector panel.
3. Fasten the IFB shield L, IFB shield and connector panel to the unit using the five screws that are removed in the step 1.

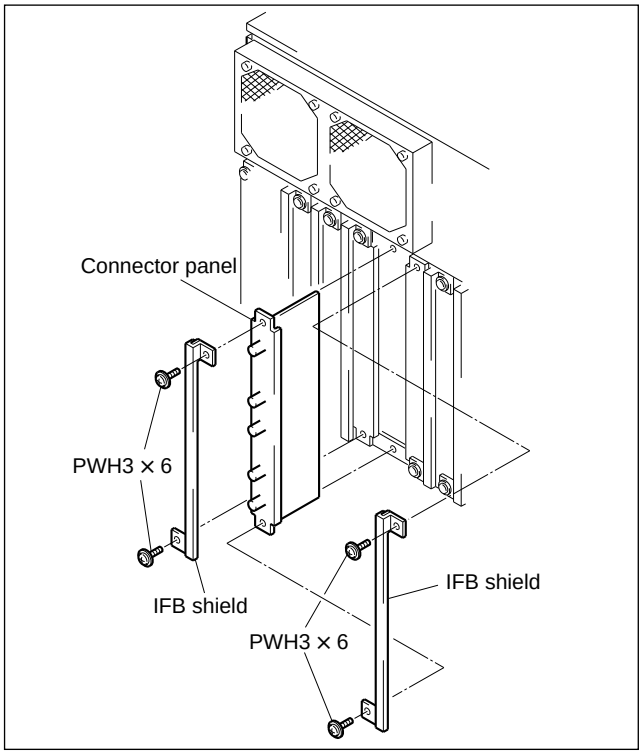


<Type 2>

1. Remove the four screws, and remove the two IFB shields and blank panel.

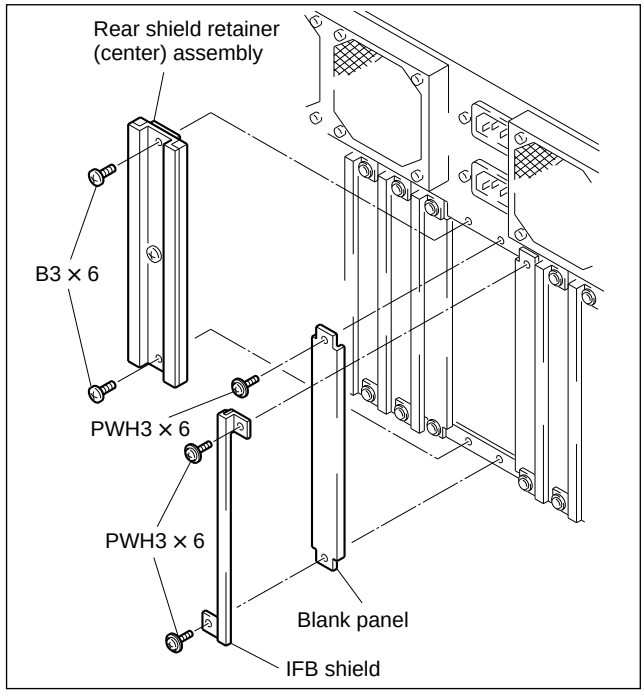


2. Insert the connector panel.
3. Fasten the two IFB shields and connector panel to the unit using the four screws that are removed in the step 1.

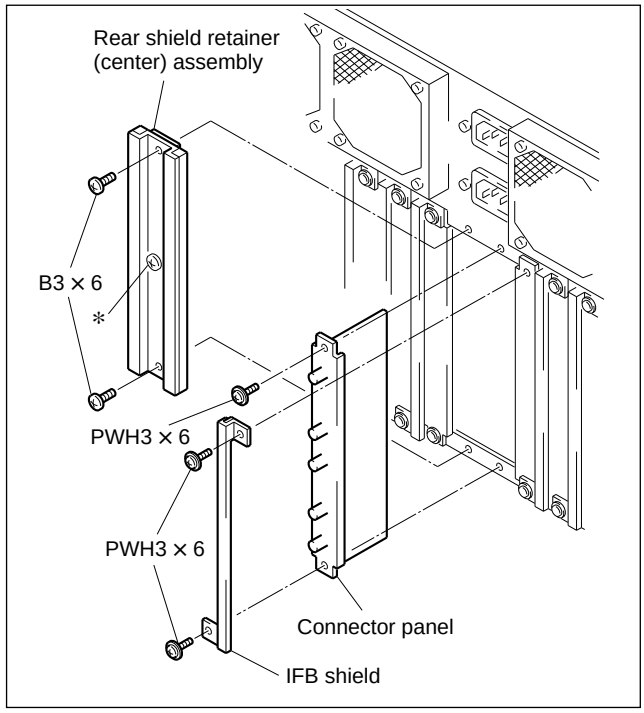


<Type 3>

1. Remove the five screws, and remove the IFB shield, rear shield retainer (center) assembly and blank panel.



2. Insert the connector panel.
3. Fasten the IFB shield, rear shield retainer (center) assembly and connector panel to the unit using the five screws that are removed in the step 1.

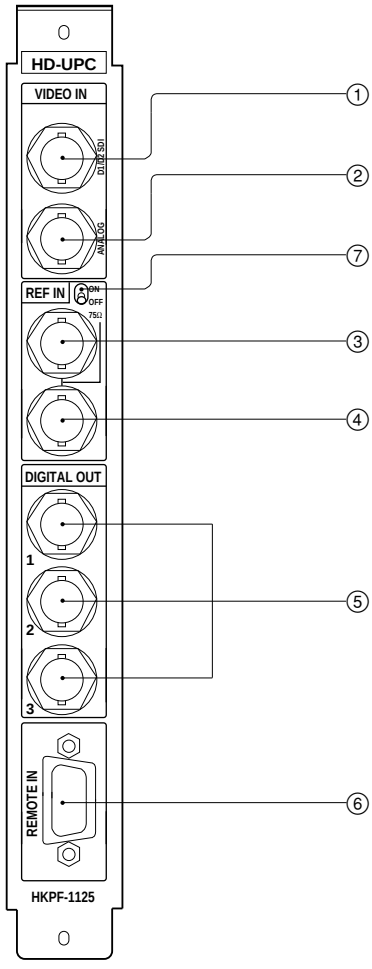


* Do not remove a center screw on the rear shield retainer (center) assembly.

http://getMANUAL.com

1-4. Names and Functions of Connectors

1-4-1. Names and Functions of Connectors



① VIDEO IN (D1/D2 SDI) Connectors (BNC type)
Inputs the digital video signal of D1 or D2 (conformed to SMPTE 259).

② VIDEO IN (ANALOG) Connector (BNC type)
Inputs the 525 Analog Composite signal.

③ REF IN connector (BNC type)
This connector is received an 1125 sync (conforming to BTA S-001B) or 525 black burst signal for external sync.

④ Loop Through Out connector (BNC type)
This connector is provided a loop through sync signal connected to the REF IN connector.

⑤ DIGITAL OUT 1 to 3 connectors (BNC types)
These connectors are provided HD SDI*1 (conforming to BTA S-004B) signal.

⑥ REMOTE IN Connector (D-sub 9pin)
Inputs the remote control signal from the digital video controller HKDV-503.

⑦ 75 Ω Termination switch
Turn ON/OFF the 75 Ω termination of sync signal connected to the REF IN connector.

1-4-2. Connectors and Cables for Connection

Use the connector and the cable below or the equivalent at the tip when cables are connected to each connector on the connector panel, during connection and service.

Note

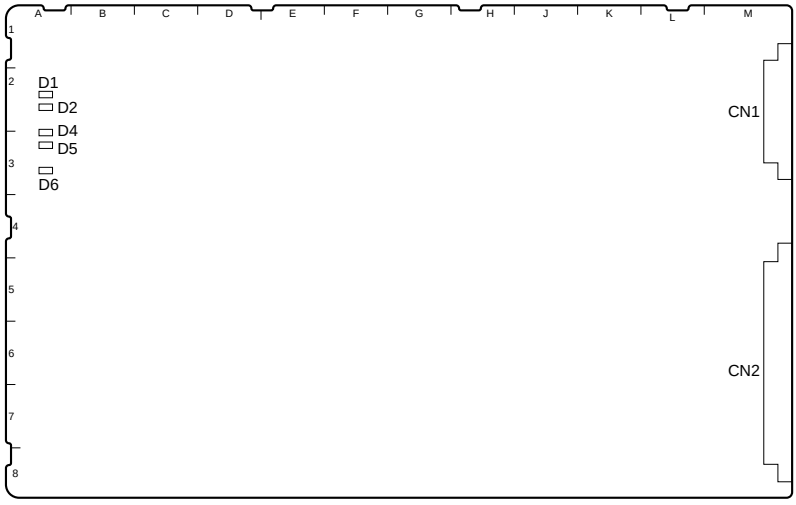
Use a 5C-FB coaxial cable when the DIGITAL OUT cable exceeds 60 m in length.

Connector on HKPF-1125 side		Adaptive connector/cable	
Panel display	**Name**	**Name**	**Sony part No.**
VIDEO IN (D1/D2 SDI*1)	BNC (75 Ω) 5C-2V coaxial cable	BNC (75 Ω)	1-569-370-12 —
(ANALOG)	BNC (75 Ω) 5C-2V coaxial cable	BNC (75 Ω)	1-569-370-12 —
REF IN BNC (75 Ω)	BNC (75 Ω) 5C-2V coaxial cable	BNC (75 Ω)	1-569-370-12 —
(Loop Through Out)	BNC (75 Ω)	BNC (75 Ω) 5C-2V coaxial cable	1-569-370-12 —
DIGITAL OUT 1 to 3	BNC (75 Ω)	BNC (75 Ω) 5C-2V coaxial cable	1-569-370-12 —
REMOTE IN	D-sub (9P)	9P-15P Remote Control cable RCC-1502H (2 m) RCC-1505H (5 m) RCC-1510H (10 m) RCC-1530H (30 m)	
		CONNECTOR, 9P,MALE	1-560-651-00
		SHELL, JUNCTION 9P	1-561-749-00

*1 : SDI means Serial Digital Interface.

1-5. Names and Functions of LEDs

DPR-117 board



D1 (green) : +5V/–5V power display lamp
Lights: Normal
Lights off: Abnormal

D2 (green) : Active line display lamp
Lights: 1035 lines
Lights off: 1080 lines

D4 (green) : Video exist (input display) lamp
Lights: Input signal is present.
Lights off: No input signal

D5 (green) : Audio exist (input display) lamp
Lights : Input signal is present.
Lights off: No input signal

D6 (red) : EDH error display lamp
Lights: Error is present.
Lights off: No error

Section 2
Service Overview

2-1. Notes on Repair Parts

1. Safety Related Components Warning

Components marked ⚠ are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.

Parts list has the present standardized repair parts.

3. Stock of Parts

Parts marked with “o” at SP(Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

2-2. Replacement of Fuse

HKPF-1125 mounts the one fuse. When abnormality occurs in equipment and when an overcurrent flows, the fuse is burned. Use the component specified below as the fuse to be replaced.

Before replacing the fuse, eliminate a foreign substance that causes a short-circuit.

DPR-117 board : PS1000 (M-2)

Ref. No.	Part name	Sony Parts No.
PS1000	Chip, fuse 5 A/125V	⚠1-533-627-21

Note

The alphanumeric character in parentheses indicates the address on the board.

WARNING

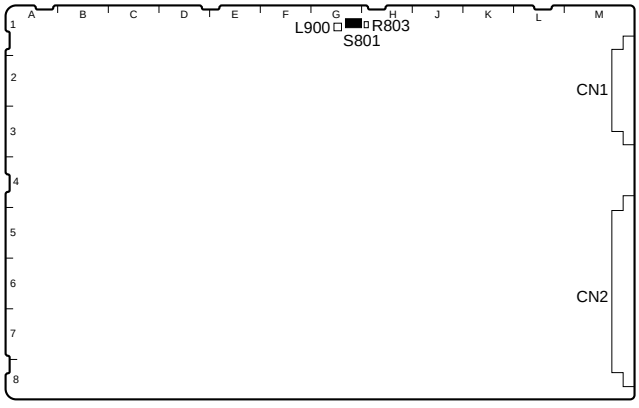
The fuse is critical to safe operation. Do not replace the fuse with one other than specified. This may cause a fire and electric shock. Be sure to use the specified fuse.

2-3. Rewriting the CPU Program

IC804 on the DPR-117 board is a CPU with ROM, and the program can be rewritten without removing it from the DPR-117 board.
ROM version can be identified its suffix name, and it will be rewritten by updating the program.

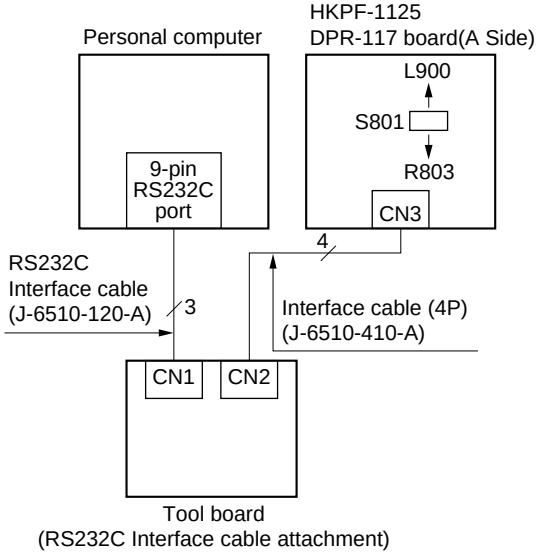
Notes on Rewriting the Program

Since stored set value information from the remote controller are cleared by rewriting the program, be sure to set all data again with remote controller.



DPR-117 BOARD (A SIDE)

Connection



Equipment Required

- Personal computer (PC)
  IBM PC/AT compatible*1
  Operating system: Windows95 or Windows98*2
  Port: 9-pin RS-232C connector
- F-ZTAT microcomputer on-board writing software
  Hitachi Semiconductor, Inc. : HS6400FWIW3SF
- RS-232C interface cable with tool board
  For IBM PC compatible PCs*1 : J-6510-120-A
- Interface cable (4P) : J-6510-410-A
- Program data file to be updated

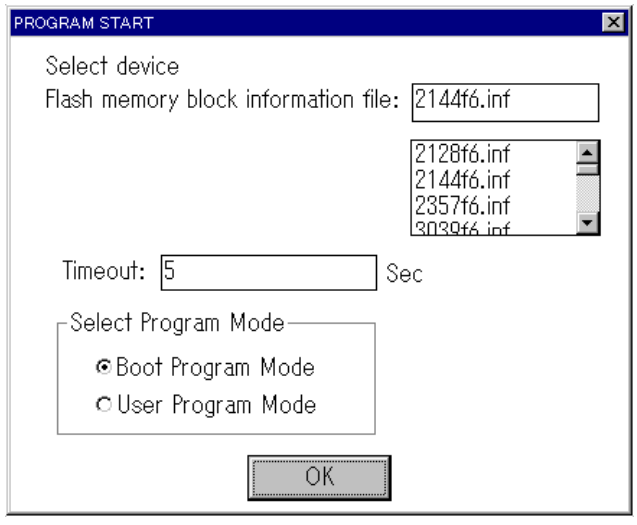
*1 "IBM/PC" is the registered trademark of IBM in the United States of America and other countries.
*2 "Windows95" and "Windows98" are the registered trademark of Microsoft Corporation in the United States of America and other countries.

Procedures

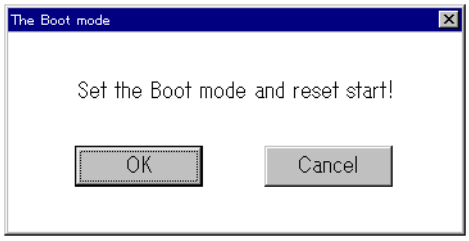
Note

The alphanumeric character in parentheses indicates the address on the board.

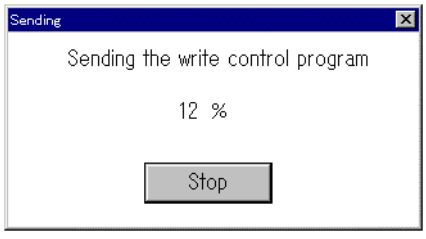
1. Set S801 (G-1) of HKPF-1125 to "R803" side.
2. Connect 4-pin interface cable onto CN2 of the tool board.
3. Connect 4-pin interface cable onto CN3 (G-3) of HKPF-1125.
4. Connect the tool board to RS-232C port of PC, then boot the Writing Software.
   The PROGRAM START dialog box will be appeared on the screen.
5. Set each box in the PROGRAM START dialog box as follows, then click "OK" button.
   - Flash memory block information file: 2144f6.inf
   - Timeout: 5 [seconds]
   - Select Program Mode: Boot Program Mode



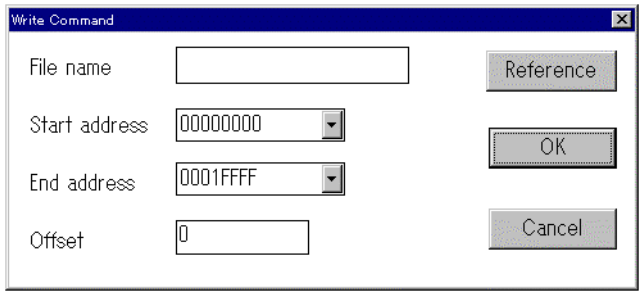
6. During appearing “The Boot mode” dialog box, turn ON the power of HKPF-1125.



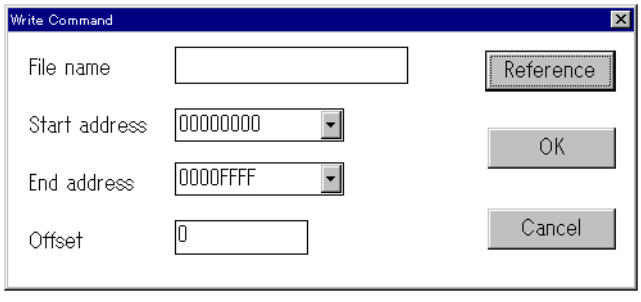
7. Click “OK” button in “The Boot mode” dialog box. Since “Sending” dialog box will be appeared, wait until it becomes “100 %.” When it reaches “100 %,” dialog box will be automatically disappeared.



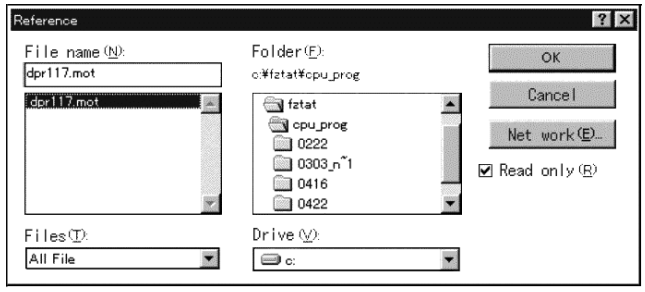
8. Click “WRITE” on the menu bar to display “Write Command” dialog box.



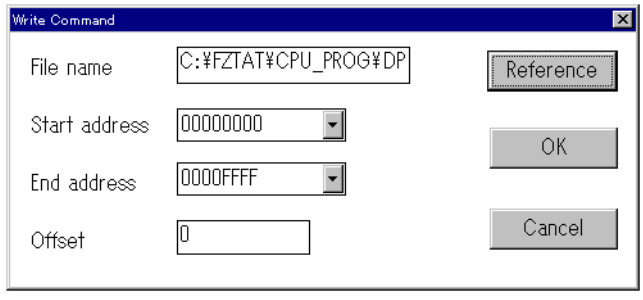
9. Input “0” in “Offset” box.
10. Select “00000000” in “Start address” box.
11. Select “0000FFFF” in “End address” box.



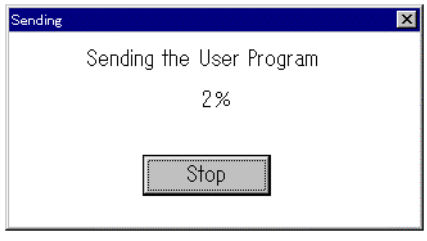
12. Click “Reference” button to designate the file to be written.
When the “Reference” dialog box appears, select the program data file, then click “OK” button.
Ex: Target data is stored in “c:\fztat\cpu_prog” directory.



13. Make sure that the designated file is in the list box, then click “OK” button.



14. Wait until the end of transmission.
The “Sending” dialog box appears during transmitting the program data. It disappears when the transmission has been completed.



15. Select “QUIT” from the File menu to quit the software.
16. Turn OFF the power of HKPF-1125.
17. Remove the tool cables, and be sure to set S801 (G-1) to “L900” position.

2-4. Notes during Replacement of Board and Parts on Board

The DPR-117 and DIF-79 boards mount a high-frequency circuit (1.5 GHz). It is impossible to be replaced any electric parts in the high-frequency circuit block.
When the high-frequency circuit parts on the DPR-117 are defective, buy HKPF-1125's unit.
When the high-frequency circuit parts on the DIF-79 board are defective, replace the whole DIF-79 board.

Note

Since the level of the DIGITAL OUT signal from the DIF-79 board is precisely adjusted at the factory, do not make adjustment of RV1 and RV2.

2-5. Circuit Description

DIF-79 board (Input side)

The D1/D2 SDI signal input to CN2 undergoes automatic equalization (cable compensation) for losses for cables up to 200 m (5C-2V) by the cable equalizer (IC200) and is sent to the DPR-117 board (Processor Board).
In the external sync signal input circuit, the 1125 or 525 external sync signal input from CN4 is level-set by the 75 Ω termination ON/OFF switch, driven at 75 Ω again by IC101 later, and sent to the DPR-117 board (Processor Board).
The ANALOG signal is sent to the DPR-117 board directly. A remote control signal that is input to CN9 is passed through the EMI filters (FL1 to FL7), then it is sent to the DPR-117 board.

DIF-79 board (Output side)

The serial data input from the DPR-117 board is latched by IC2 at the entrance and supplied to the cable driver composed of IC3 and IC4.
The cable driver is composed of two pairs of differential drivers which are each equipped with an output amplitude adjustment potentiometer.
Two signals (inverted and non-inverted signals) are provided from one differential driver and three HD SDI output signals in all are obtained.

DPR-117 board

The D1/D2 SDI signal from the DIF-79 board is input to IC2. When the input is D1 signal, it is converted into the 10 bits parallel signal of 7 MHz rate. When it is D2 signal, it is converted into the 10 bits parallel signal of 14.3 MHz rate. IC2 output is sent to IC5, IC42 and IC100.
In case of D1 signal, timing is detected by IC42, then the video data is input to IC451.
In case of D2 signal, audio data components are extracted by IC5, rate conversion and D2-to-D1 conversion are carried out by IC311, then the video data is input to IC451.
IC100 performs to detect the EDH and to separate the audio signal from the digital data stream. Separated audio data is sent to IC451.
Input of the analog signal is terminated at the input section of the board, it is driven by the 75 Ω driver (IC206) again, then the output of IC206 is sent to the analog signal processing block via the coaxial cable.
In the analog processing block, input signal is clamped by Q206, Q207 and Q209. Clamped signal is converted into the 10 bits digital data of 4fsc by IC304, then it is input to IC311. Since IC311 is a digital Y/C separator, data rate of input signal is converted and D2 data is converted into D1 data. The video data output from IC311 is sent to IC451.
IC451 is a up-converter where the input signal is converted to 20 bits of 74 MHz rate video data. The output video data is sent to IC500. In IC451 also functions to delay the audio signal proportional to the video data processing. Delayed audio signal is also sent to IC500.
IC500 functions to multiplex the audio signal in the video signal. It also add the supplementary data. The output of IC500 is sent to IC502.
The parallel data input to IC502 is converted to HD SDI (1.5 GHz) signal, then it is output to the DIF-79 board.
IC701 generates a timing signal and clock (74 MHz and 48 kHz) for the reference output signals. IC701 forms a PLL (Phase Locked Loop) circuit of VCXO (Voltage Controlled Crystal Oscillator) type, and IC701 creates various clock signals locked to the field frequency (59.94 Hz).
The sync separation from the external sync signal is performed by IC607 (1125 sync) and IC610 (525 sync) respectively.
The CPU (IC804) controls all operation of the board, such as reading switch setting, LED on/off control, initialization of each device, communication of the ISR interface board, etc. The latest communication setting information to the HKDV-503 are stored in IC807.
The following four regulators are housed inside the unit:

- +3.1 V switching regulator
- +1.8 V switching regulator
- +1.2 V series regulator
- −2.0 V series regulator

2-6. ISR (Interactive Status Reporting)

When HKPF-1125 is attached in the digital video interface unit together with an optional ISR interface board (BKPF-500), the messages below are sent from HKPF-1125 to monitor the operation state of HKPF-1125.

Status messages (Warning, error and other information)

Message	Description
NO INPUT	Indicates that the signal is not provided to the connector selected by the INPUT SEL switch.
AUDIO ERROR	Indicates that the audio signal is not multiplexed to the SDI input signal.

Setup messages

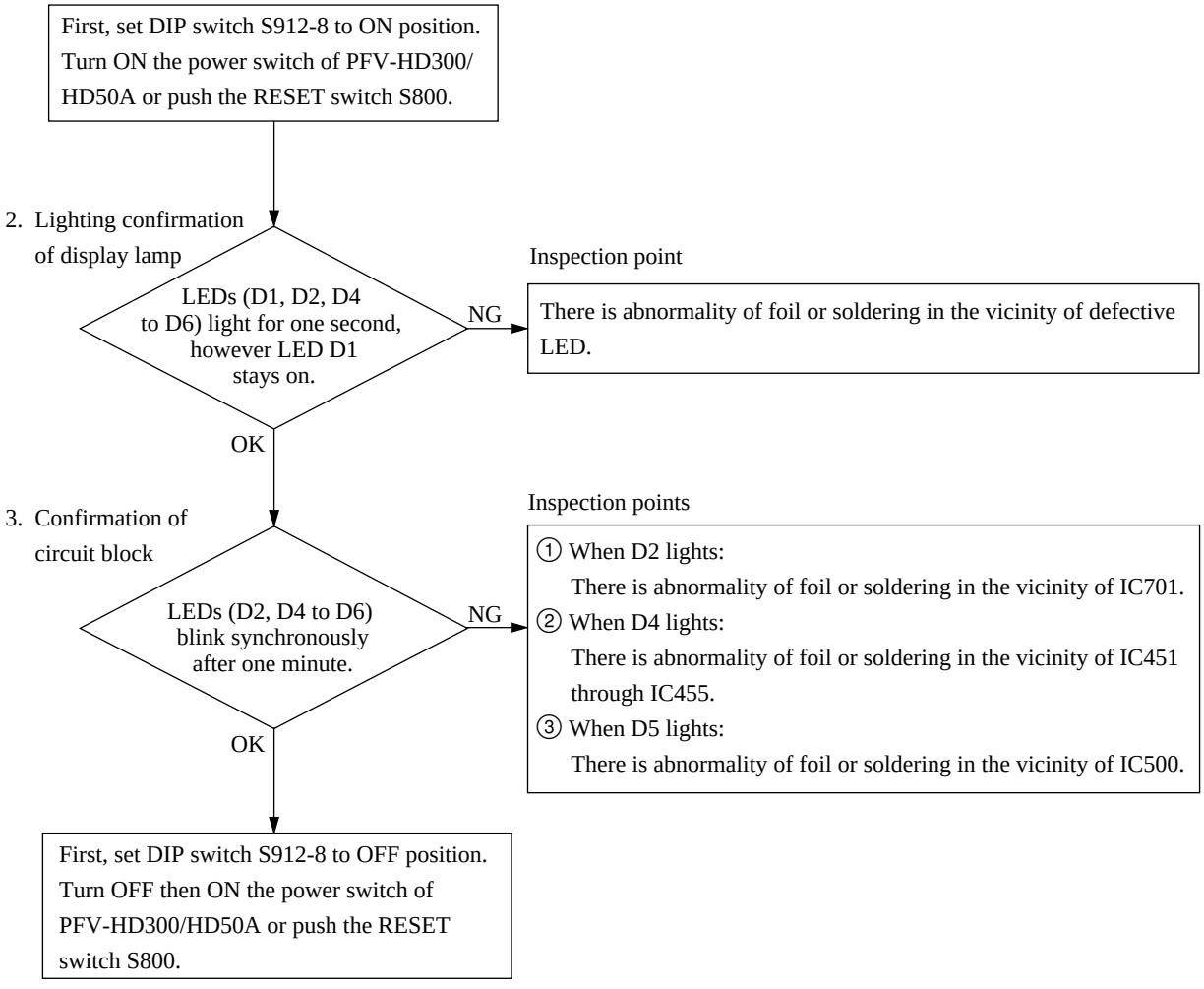
Message	Status	Description
LOCAL SW	ON OFF	Indicates that the setting status of REMOTE/LOCAL switch S4.
INPUT SELECT SW	D1 SDI D2 SDI ANALOG	Indicates that the setting status of INPUT SEL switch S1.
REF SELECT SW	INPUT LOCK EXT LOCK 1125 EXT LOCK 525	Indicates that the setting status of REF SEL switch S2.
ASPECT SELECT SW	SQ LB EC	Indicates that the setting status of ASPECT switch S5.
CONVERSION SEL SW	ADAPTIVE FIELD FRAME	Indicates that the setting status of CONVERSION switch S3.
ACTIVE LINE SW	1035 1080	Indicates that the setting status of LINE 1080/1035 switch S905.

http://getMANUAL.com

Section 3
Test Mode (Self-diagnosis)

HKPF-1125 is carried out the self-diagnosis of a defective circuit block in the test mode.
Before starting the test mode, be sure to check that the signal is input to D1 SDI and INPUT SEL switch S1 is set to “D1 SDI.”

1. Starting of test mode


First, set DIP switch S912-8 to ON position. Turn ON the power switch of PFV-HD300/ HD50A or push the RESET switch S800.
2. Lighting confirmation of display lamp
LEDs (D1, D2, D4 to D6) light for one second, however LED D1 stays on.
NG
Inspection point
There is abnormality of foil or soldering in the vicinity of defective LED.
OK
3. Confirmation of circuit block
LEDs (D2, D4 to D6) blink synchronously after one minute.
NG
Inspection points
① When D2 lights:
There is abnormality of foil or soldering in the vicinity of IC701.
② When D4 lights:
There is abnormality of foil or soldering in the vicinity of IC451 through IC455.
③ When D5 lights:
There is abnormality of foil or soldering in the vicinity of IC500.
OK
First, set DIP switch S912-8 to OFF position. Turn OFF then ON the power switch of PFV-HD300/HD50A or push the RESET switch S800.

Section 4
Electrical Alignment

4-1. Equipment Required

Measuring Equipment

- Digital voltmeter
  Advantest TR6845 or equivalent
- Test signal generator
  Sony Tektronix 1410 or equivalent
- 75 Ω terminator
- Extension board, EX-331
  Sony part No. : J-6185-960-A
- Oscilloscope
  Tektronix 2465B or equivalent
- Frequency counter
  Advantest TR5821AK or equivalent

Peripheral Equipment

- Sony digital video interface unit
  PFV-HD300 or PFV-HD50A
- HD SDI D/A conversion board
  HKPF-102 or equivalent

4-2. Preparation

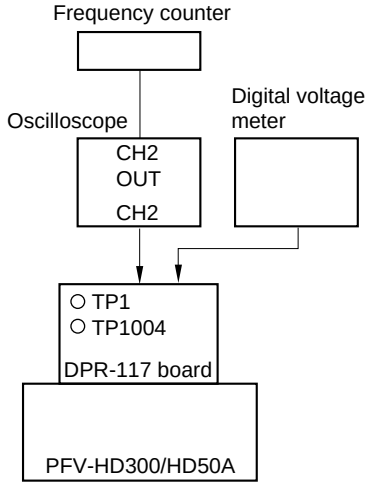
1. Notes on Adjustment

(1) Extend the DPR-117 board using the extension board EX-331.

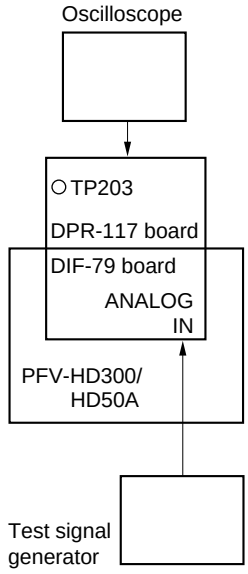
(2) Before adjustments, be sure to warm up the unit for ten minutes or more.

2. Connection

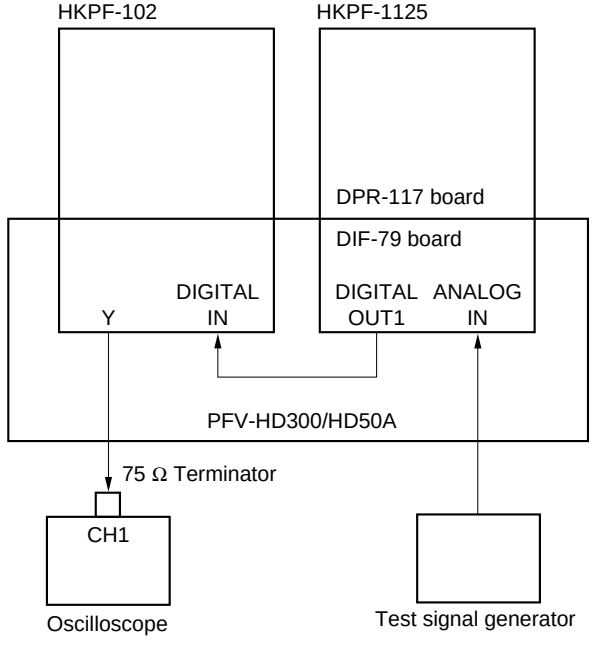
Connection 1



Connection 2



Connection 3



4-3. Free Run 74 MHz Frequency Adjustment (59.94)

When IC750, IC753 or X750 is replaced, perform this adjustment.

Preparations

- Connect the equipment. (Refer to Connection 1 in Section 4-2.)
- No signal input to REF IN and VIDEO IN connectors.

Adjustment Procedures

Test point:	R774 (close to IC701)/ DPR-117 board (F-7)
Adjustment point :	⊘RV750/DPR-117 board (E-8)
Specification :	74.1758 ± 0.0001 MHz

4-4. +1.2 V Power Voltage Adjustment

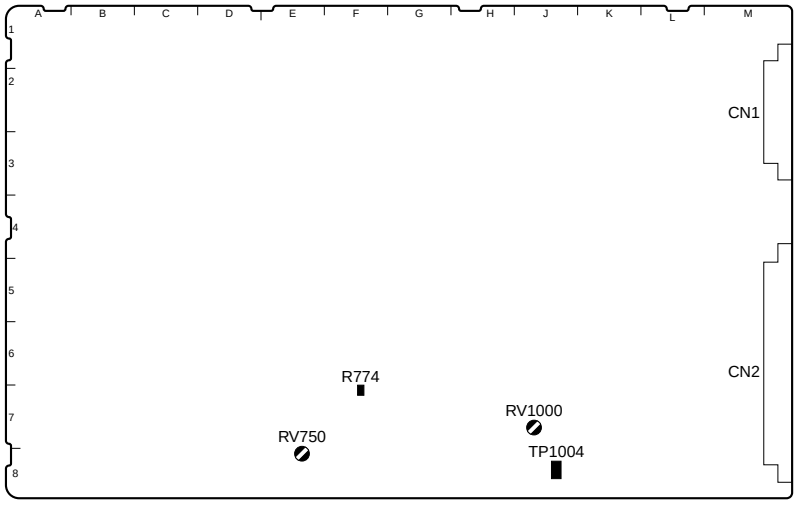
When IC1004 or IC1006 is replaced, perform this adjustment.

Preparations

- Connect the equipment. (Refer to Connection 1 of Section 4-2.)
- No signal input to REF IN and VIDEO IN connectors.
- Connect digital voltmeter to TP1004/DPR-117 board (J-8).

Adjustment Procedures

Test point :	TP1004/DPR-117 board (J-8).
Adjustment point :	⊘RV1000/DPR-117 board (J-7)
Specification :	+1.20 ± 0.02 V



DPR-117 BOARD (A SIDE)

4-5. 27 MHz & 14.32 MHz Free Run Frequency Adjustment

When IC2 is replaced, perform this adjustment.

Preparation 1

- Connect the equipment. (Refer to Connection 1 of Section 4-2.)
- No signal input to REF IN and VIDEO IN connectors.
- Set S912-5/DPR-117 board (B-1) to ON position.
- Connect frequency counter to TP1/DPR-117 board.
- Set S1/DPR-117 board (A-3) to D1 SDI.

Adjustment Procedure 1

Test point : TP1/DPR-117 board (L-5)
Adjustment point : ⊘RV1/DPR-117 board (M-4)
Specification : 27.00 ±0.05 MHz

Preparation 2

- Set S1/DPR-117 board (A-3) to D2 SDI.

Adjustment Procedures 2

Test point : TP1/DPR-117 board (L-5)
Adjustment point : ⊘RV2/DPR-117 board (M-4)
Specification : 14.32 ±0.03 MHz

Setting after Adjustment

Set S912-5/DPR-117 board to OFF position.

4-6. Composite Decoder Block Pedestal Adjustment

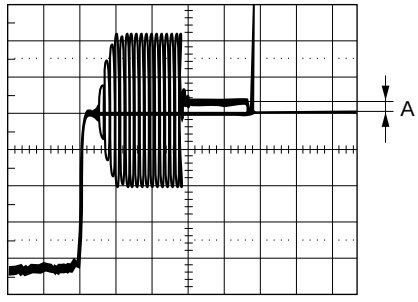
When IC300 is replaced, perform this adjustment.

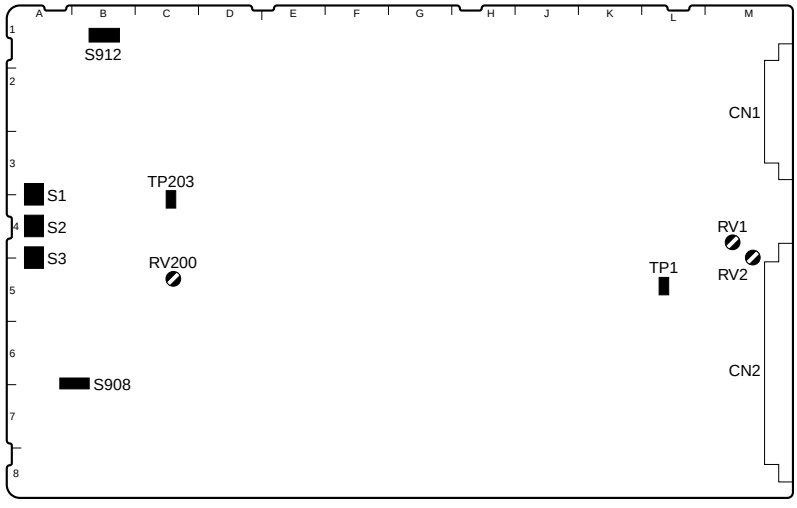
Preparations

- Connect the equipment. (Refer to Connection 2 of Section 4-2.)
- Input 75 % color bars signal from the test signal generator to VIDEO IN (ANALOG) connector.
- Set the switches on the DPR-117 board as shown below:
  S1 (board panel) : ANALOG
  S2 (board panel) : INPUT
  S908 (A-6) : REF LOCK

Adjustment Procedures

Equipment : Oscilloscope
Test point : TP203/DPR-117 board (C-4)
Adjustment point : ⊘RV200/DPR-117 board (C-5)
Specification : A = 0 ± 5 mV





DPR-117 BOARD (A SIDE)

4-7. Composite Decoder Block Input Level Adjustment

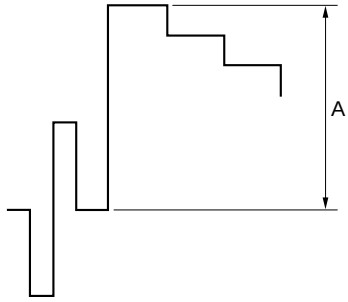
When IC300 is replaced, perform this adjustment.

Preparations

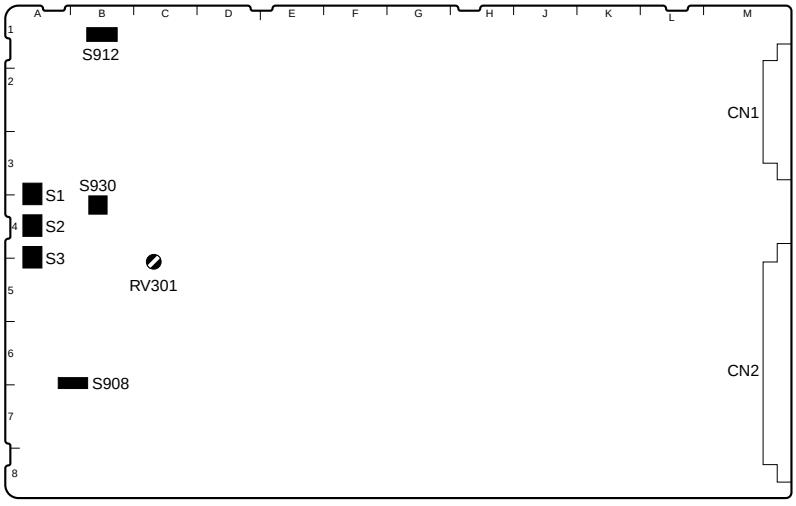
- Connect the equipment. (Refer to Connection 3 of Section 4-2.)
- Input the 75 % color bars signal from the test signal generator to VIDEO IN (ANALOG) connector.
- Set the switches on the DPR-117 board as shown below:
  S1 (board panel) : ANALOG
  S2 (board panel) : INPUT
  S908 (A-6) : REF LOCK

Adjustment Procedures

1. Set the switches on the DPR-117 board as shown below, then output the color bars signal from the internal signal generator.
   S912-7 (B-1) : ON
   S930 (B-4) : 8
2. Observe the white signal section of Y output (HKPF-102) with an osilloscope, and measure the level “A”.
   Equipment : Oscilloscope (Be sure to terminate with 75 Ω terminator.)
   Test point : Y output of the DA board (HKPF-102)



3. Stop the internal signal generator.
   Set S912-7 (B-1) to OFF position.
4. Adjust the input level.
   Measure the white signal section of Y output (HKPF-102) with oscilloscope. If the measured level is out of the following specification, perform adjustment.
   Equipment : Oscilloscope (Be sure to terminate with 75 Ω terminator.)
   Test point : Y output of the DA board (HKPF-102)
   Adjustment point : ⊘RV301/DPR-117 board (C-5)
   Specification : A ± 3.5 mV



DPR-117 BOARD (A SIDE)

Section 5
Spare Parts

5-1. Electrical Part List

DIF-79 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8322-477-A	o	MOUNTED CIRCUIT BOARD, DIF-79
2pcs	7-682-947-01	s	SCREW +PSW 3X6(EP-FE/ZN/CM2)
2pcs	7-685-547-14	s	SCREW +BTP 3X10(EP-FE/CU,NI,CR
CN1	1-563-341-11	s	CONNECTOR HOUSING
CN2	1-764-273-11	s	CONNECTOR, COAXIAL (BNC TYPE)
CN3	1-764-273-11	s	CONNECTOR, COAXIAL (BNC TYPE)
CN4	1-764-273-11	s	CONNECTOR, COAXIAL (BNC TYPE)
CN5	1-764-273-11	s	CONNECTOR, COAXIAL (BNC TYPE)
CN6	1-764-273-11	s	CONNECTOR, COAXIAL (BNC TYPE)
CN7	1-764-273-11	s	CONNECTOR, COAXIAL (BNC TYPE)
CN8	1-764-273-11	s	CONNECTOR, COAXIAL (BNC TYPE)
CN9	1-563-770-11	s	SOCKET,D-SUB CONNECTOR 9P

DPR-117 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8322-475-A	o	MOUNTED CIRCUIT BOARD, DPR-117
2pcs	2-182-909-01	o	LEVER,PC BOARD
1pc	3-622-682-02	o	PANEL(1125),FRONT
2pcs	4-352-844-01	s	PIN, LEAD, COATING
2pcs	7-626-320-11	s	SPRING PIN,3X8 (STEEL)
4pcs	7-682-947-01	s	SCREW +PSW 3X6(EP-FE/ZN/CM2)
C1	1-135-212-21	s	CAPACITOR TANTALUM 2.2MF/35V
C2	1-135-212-21	s	CAPACITOR TANTALUM 2.2MF/35V
C3	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C4	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C5	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C6	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C7	1-117-232-11	s	CAPACITOR, (SMD) 22MF/4V
C8	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C9	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C10	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C11	1-117-232-11	s	CAPACITOR, (SMD) 22MF/4V
C12	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C13	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C14	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C15	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C16	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C17	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C18	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C19	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C20	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C21	1-162-915-11	s	CAPACITOR,CERAMIC 10PF/50V CH
C22	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C23	1-115-169-11	s	CAPACITOR,TANTAL (SMD) 10MF
C24	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C25	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C26	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C27	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C28	1-115-169-11	s	CAPACITOR,TANTAL (SMD) 10MF
C29	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C30	1-115-169-11	s	CAPACITOR,TANTAL (SMD) 10MF
C31	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C32	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C33	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C34	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C40	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C41	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C42	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C43	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C44	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C45	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C46	1-126-396-11	s	CAPACITOR ELECT 47MF/16V(CHIP)
C100	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C101	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C102	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C103	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C104	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C105	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C106	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C200	1-127-564-11	s	CAPACITOR ELECT 150MF/6.3V
C201	1-127-564-11	s	CAPACITOR ELECT 150MF/6.3V
C202	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C203	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C204	1-127-517-11	s	CAPACITOR,ELECT 150MF/16V
C205	1-127-517-11	s	CAPACITOR,ELECT 150MF/16V
C206	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C207	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C208	1-163-239-11	s	CAPACITOR CHIP CERAMIC 33PF/50
C210	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C211	1-127-517-11	s	CAPACITOR,ELECT 150MF/16V
C212	1-163-237-11	s	CAPACITOR CERAMIC 27PF/50V
C213	1-104-608-11	s	CAPACITOR, ELECT 33MF/6.3V
C214	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C215	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C216	1-163-239-11	s	CAPACITOR CHIP CERAMIC 33PF/50
C217	1-163-259-91	s	CAPACITOR,CHIP CERAMIC 220PF
C218	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C219	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C220	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C221	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C222	1-135-070-00	s	CAPACITOR TANTALUM 0.1MF/35V
C223	1-135-072-21	s	CAPACITOR,TANTALUM 0.22MF/35V
C224	1-126-392-11	s	CAPACITOR,CHIP ELECT 100MF/6.3
C225	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C226	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C227	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C228	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C229	1-107-686-11	s	CAPACITOR,CHIP ELECT 4.7M/16V
C230	1-104-913-11	s	CAPACITOR,CHIP TANTAL 10MF/16V
C232	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C233	1-126-392-11	s	CAPACITOR,CHIP ELECT 100MF/6.3
C234	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C235	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C236	1-126-392-11	s	CAPACITOR,CHIP ELECT 100MF/6.3
C237	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C238	1-163-239-11	s	CAPACITOR CHIP CERAMIC 33PF/50
C239	1-163-259-91	s	CAPACITOR,CHIP CERAMIC 220PF
C240	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C241	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C242	1-163-275-11	s	CAPACITOR CERAMIC 1000PF/50V
C243	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C244	1-163-133-00	s	CAPACITOR,CHIP CERAMIC 470PF
C245	1-163-275-11	s	CAPACITOR CERAMIC 1000PF/50V
C246	1-163-275-11	s	CAPACITOR CERAMIC 1000PF/50V
C247	1-163-133-00	s	CAPACITOR,CHIP CERAMIC 470PF
C248	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C249	1-163-263-11	s	CAPACITOR CERAMIC 330PF/50V
C250	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C251	1-163-275-11	s	CAPACITOR CERAMIC 1000PF/50V
C252	1-163-259-91	s	CAPACITOR,CHIP CERAMIC 220PF
C253	1-163-259-91	s	CAPACITOR,CHIP CERAMIC 220PF
C254	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C255	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C256	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C257	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C258	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C259	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C260	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C261	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C262	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C263	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C264	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C265	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C266	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C267	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C269	1-163-275-11	s	CAPACITOR CERAMIC 1000PF/50V
C270	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C271	1-126-392-11	s	CAPACITOR,CHIP ELECT 100MF/6.3
C272	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C273	1-163-275-11	s	CAPACITOR CERAMIC 1000PF/50V
C274	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C275	1-126-392-11	s	CAPACITOR,CHIP ELECT 100MF/6.3
C276	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C277	1-126-392-11	s	CAPACITOR,CHIP ELECT 100MF/6.3
C278	1-162-718-11	s	CAPACITOR,CERAMIC 220PF/50V
C279	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C280	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C281	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C282	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C283	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C284	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C285	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C286	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C300	1-117-154-11	s	CAPACITOR, ELECT 33MF/16V
C301	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C302	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C303	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C304	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C305	1-113-642-11	s	CAPACITOR, TANTALUM 47MF/10V
C306	1-113-642-11	s	CAPACITOR, TANTALUM 47MF/10V
C307	1-117-154-11	s	CAPACITOR, ELECT 33MF/16V
C308	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C309	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C310	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C311	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C312	1-126-392-11	s	CAPACITOR,CHIP ELECT 100MF/6.3
C313	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C314	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C315	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C316	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C317	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C318	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C319	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C320	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C321	1-163-227-11	s	CAPACITOR CERAMIC 10PF/50V(CH)
C322	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C324	1-104-563-11	s	CAPACITOR, CHIP FILM 0.1MF
C325	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C326	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C327	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C328	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C329	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C330	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C331	1-126-392-11	s	CAPACITOR,CHIP ELECT 100MF/6.3
C332	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C333	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C334	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C335	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C336	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C337	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C338	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C339	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C341	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C342	1-126-392-11	s	CAPACITOR,CHIP ELECT 100MF/6.3
C343	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C344	1-126-392-11	s	CAPACITOR,CHIP ELECT 100MF/6.3
C345	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C346	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C347	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C348	1-126-392-11	s	CAPACITOR,CHIP ELECT 100MF/6.3
C349	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C350	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C351	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C352	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C353	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C354	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C355	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C356	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C357	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C358	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C359	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C360	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C400	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C401	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C402	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C403	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C404	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C450	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C451	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C452	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C453	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C454	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C455	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C456	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C457	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C458	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C459	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C460	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C461	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C462	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C463	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C464	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C465	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C466	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C467	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C468	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C469	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C470	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C471	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C472	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C473	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C474	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C475	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C476	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C477	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C478	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C479	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C480	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C481	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C482	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C483	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C484	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C485	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C486	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C487	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C488	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C489	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C490	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C491	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C492	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C493	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C494	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C495	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C496	1-128-589-11	s	CAPACITOR ERECT 47MF/6.3V(105C
C497	1-128-589-11	s	CAPACITOR ERECT 47MF/6.3V(105C
C600	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C601	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C602	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C603	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C604	1-163-239-11	s	CAPACITOR CHIP CERAMIC 33PF/50
C605	1-163-235-11	s	CAPACITOR,CHIP CERAMIC 22PF/50
C606	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C607	1-163-235-11	s	CAPACITOR,CHIP CERAMIC 22PF/50
C608	1-163-259-91	s	CAPACITOR,CHIP CERAMIC 220PF
C609	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C610	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C611	1-163-253-11	s	CAPACITOR CERAMIC 120PF/50V
C612	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C613	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C614	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C615	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C616	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C617	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C618	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C619	1-163-253-11	s	CAPACITOR CERAMIC 120PF/50V
C620	1-117-154-11	s	CAPACITOR, ELECT 33MF/16V
C621	1-117-154-11	s	CAPACITOR, ELECT 33MF/16V
C622	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C623	1-163-133-00	s	CAPACITOR,CHIP CERAMIC 470PF
C624	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C625	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C626	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C627	1-163-259-91	s	CAPACITOR,CHIP CERAMIC 220PF
C628	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C629	1-163-245-11	s	CAPACITOR CERAMIC 56PF/50V
C630	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C631	1-163-259-91	s	CAPACITOR,CHIP CERAMIC 220PF
C632	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C633	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C634	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C636	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C637	1-163-253-11	s	CAPACITOR CERAMIC 120PF/50V
C638	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C639	1-163-253-11	s	CAPACITOR CERAMIC 120PF/50V

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C640	1-104-559-11	s	CAPACITOR FILM 0.047MF/16V
C641	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C642	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C643	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C644	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C645	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C646	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C647	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C648	1-163-253-11	s	CAPACITOR CERAMIC 120PF/50V
C700	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C701	1-127-564-11	s	CAPACITOR ELECT 150MF/6.3V
C702	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C703	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C704	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C705	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C706	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C707	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C708	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C709	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C710	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C711	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C712	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C720	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C721	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C722	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C750	1-117-154-11	s	CAPACITOR, ELECT 33MF/16V
C751	1-163-275-11	s	CAPACITOR CERAMIC 1000PF/50V
C752	1-115-340-11	s	CAPACITOR CERAMIC 0.22MF/25V B
C753	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C754	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C755	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C756	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C757	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C758	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C759	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C760	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C761	1-126-394-11	s	CAPACITOR ELECT 10MF/16V(CHIP)
C762	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C763	1-126-394-11	s	CAPACITOR ELECT 10MF/16V(CHIP)
C764	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C765	1-126-394-11	s	CAPACITOR ELECT 10MF/16V(CHIP)
C766	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C767	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C768	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C769	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C770	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C771	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C772	1-117-154-11	s	CAPACITOR, ELECT 33MF/16V
C773	1-117-154-11	s	CAPACITOR, ELECT 33MF/16V
C800	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C801	1-126-396-11	s	CAPACITOR ELECT 47MF/16V(CHIP)
C802	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C803	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C804	1-163-235-11	s	CAPACITOR,CHIP CERAMIC 22PF/50
C805	1-163-235-11	s	CAPACITOR,CHIP CERAMIC 22PF/50
C806	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C807	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C808	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C809	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C810	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C811	1-111-253-11	s	CAPACITOR TANTALUM 100MF/6.3V
C812	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C813	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C814	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C815	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C816	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C817	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C818	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C819	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C820	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C821	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C822	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C823	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C824	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C825	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C826	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C827	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C828	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C829	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C830	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C831	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C832	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C833	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C834	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C835	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C836	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C837	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C838	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C839	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C900	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C901	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C902	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C903	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C904	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C905	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C906	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C907	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C908	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C1000	1-128-416-11	s	CAPACITOR ELECT 100MF/16V(105C
C1001	1-128-416-11	s	CAPACITOR ELECT 100MF/16V(105C
C1002	1-128-416-11	s	CAPACITOR ELECT 100MF/16V(105C
C1003	1-128-416-11	s	CAPACITOR ELECT 100MF/16V(105C
C1004	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C1005	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C1006	1-126-394-11	s	CAPACITOR ELECT 10MF/16V(CHIP)
C1007	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C1009	1-126-398-11	s	CAPACITOR ELECT 4.7MF/35V(CHIP
C1010	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C1011	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C1012	1-128-416-11	s	CAPACITOR ELECT 100MF/16V(105C
C1013	1-126-394-11	s	CAPACITOR ELECT 10MF/16V(CHIP)
C1014	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C1015	1-126-398-11	s	CAPACITOR ELECT 4.7MF/35V(CHIP
C1016	1-126-398-11	s	CAPACITOR ELECT 4.7MF/35V(CHIP
C1017	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C1018	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C1019	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C1020	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF

http://getMANUAL.com

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C1021	1-164-218-11	s	CAPACITOR,CERAMIC 180PF/50V CH
C1022	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C1023	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C1024	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C1025	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C1026	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C1027	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C1028	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C1029	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C1030	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C1031	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C1032	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C1033	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C1034	1-127-517-11	s	CAPACITOR,ELECT 150MF/16V
C1035	1-127-517-11	s	CAPACITOR,ELECT 150MF/16V
C1036	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C1037	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C1038	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C1039	1-117-967-11	s	CAPACITOR,ELECT 330MF 10V
C1040	1-126-394-11	s	CAPACITOR ELECT 10MF/16V(CHIP)
C1041	1-126-394-11	s	CAPACITOR ELECT 10MF/16V(CHIP)
C1042	1-113-578-11	s	CAPACITOR ELECT 68MF/10V
C1043	1-113-578-11	s	CAPACITOR ELECT 68MF/10V
C1044	1-126-394-11	s	CAPACITOR ELECT 10MF/16V(CHIP)
C1045	1-127-516-11	s	CAPACITOR,ELECT (SOLID)220MF
C1046	1-127-516-11	s	CAPACITOR,ELECT (SOLID)220MF
C1047	1-126-394-11	s	CAPACITOR ELECT 10MF/16V(CHIP)
C1048	1-113-991-11	s	CAPACITOR TANTALUM 33MF/16V
C1049	1-113-991-11	s	CAPACITOR TANTALUM 33MF/16V
C1050	1-127-516-11	s	CAPACITOR,ELECT (SOLID)220MF
C1051	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C1052	1-115-339-11	s	CAPACITOR CERAMIC 0.1MF/50V
C8200	1-126-396-11	s	CAPACITOR ELECT 47MF/16V(CHIP)
CN1	1-569-465-11	o	PIN, DIN CONNECTOR (DIP) 48P
CN2	1-568-144-11	o	PIN, DIN CONNECTOR (DIP) 96P
CN3	1-506-469-11	s	PIN,CONNECTOR 4P
CN5	1-506-471-11	o	PIN,CONNECTOR 6P
CN6	1-506-471-11	o	PIN,CONNECTOR 6P
D1	8-719-974-41	s	LED HLMP-6500-010
D2	8-719-974-41	s	LED HLMP-6500-010
D3	8-719-974-41	s	LED HLMP-6500-010
D4	8-719-974-41	s	LED HLMP-6500-010
D5	8-719-974-41	s	LED HLMP-6500-010
D6	8-719-974-39	s	LED HLMP-6300-010
D200	8-719-157-11	s	DIODE RD3.3M-B
D201	8-719-941-23	s	DIODE DA204U
D302	8-719-941-23	s	DIODE DA204U
D900	8-719-801-78	s	DIODE 1SS184
D901	8-719-801-78	s	DIODE 1SS184
D902	8-719-801-78	s	DIODE 1SS184
D903	8-719-801-78	s	DIODE 1SS184
D904	8-719-801-78	s	DIODE 1SS184
D905	8-719-801-78	s	DIODE 1SS184
D906	8-719-801-78	s	DIODE 1SS184
D907	8-719-801-78	s	DIODE 1SS184
D914	8-719-801-78	s	DIODE 1SS184
D915	8-719-801-78	s	DIODE 1SS184
D916	8-719-801-78	s	DIODE 1SS184

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description	
D917	8-719-801-78	s	DIODE 1SS184	
D918	8-719-801-78	s	DIODE 1SS184	
D919	8-719-801-78	s	DIODE 1SS184	
D920	8-719-801-78	s	DIODE 1SS184	
D921	8-719-801-78	s	DIODE 1SS184	
D922	8-719-801-78	s	DIODE 1SS184	
D923	8-719-801-78	s	DIODE 1SS184	
D924	8-719-801-78	s	DIODE 1SS184	
D925	8-719-801-78	s	DIODE 1SS184	
D926	8-719-801-78	s	DIODE 1SS184	
D927	8-719-801-78	s	DIODE 1SS184	
D928	8-719-801-78	s	DIODE 1SS184	
D929	8-719-801-78	s	DIODE 1SS184	
D930	8-719-801-78	s	DIODE 1SS184	
D931	8-719-801-78	s	DIODE 1SS184	
D932	8-719-801-78	s	DIODE 1SS184	
D933	8-719-801-78	s	DIODE 1SS184	
D934	8-719-801-78	s	DIODE 1SS184	
D935	8-719-801-78	s	DIODE 1SS184	
D936	8-719-801-78	s	DIODE 1SS184	
D937	8-719-801-78	s	DIODE 1SS184	
D938	8-719-801-78	s	DIODE 1SS184	
D939	8-719-801-78	s	DIODE 1SS184	
D940	8-719-801-78	s	DIODE 1SS184	
D941	8-719-801-78	s	DIODE 1SS184	
D942	8-719-801-78	s	DIODE 1SS184	
D943	8-719-801-78	s	DIODE 1SS184	
D944	8-719-801-78	s	DIODE 1SS184	
D945	8-719-801-78	s	DIODE 1SS184	
D946	8-719-801-78	s	DIODE 1SS184	
D947	8-719-801-78	s	DIODE 1SS184	
D948	8-719-801-78	s	DIODE 1SS184	
D949	8-719-801-78	s	DIODE 1SS184	
D950	8-719-801-78	s	DIODE 1SS184	
D951	8-719-801-78	s	DIODE 1SS184	
D952	8-719-801-78	s	DIODE 1SS184	
D953	8-719-801-78	s	DIODE 1SS184	
D1001	8-719-023-53	s	DIODE EA30QS04-F	
D1002	8-719-023-53	s	DIODE EA30QS04-F	
D1003	8-719-975-43	s	DIODE RB420D	
D1004	8-719-975-43	s	DIODE RB420D	
D1005	8-719-975-43	s	DIODE RB420D	
D1006	8-719-975-43	s	DIODE RB420D	
D1007	8-719-210-33	s	DIODE EC10DS2	(RECTI)
D1008	8-719-210-33	s	DIODE EC10DS2	(RECTI)
D1009	8-719-210-33	s	DIODE EC10DS2	(RECTI)
D1010	8-719-210-33	s	DIODE EC10DS2	(RECTI)
DD1000	1-475-611-11	s	CONVERTER UNIT, DC-DC	
FB1	1-543-644-11	s	BEAD, FERRITE (CHIP)	
FB2	1-543-644-11	s	BEAD, FERRITE (CHIP)	
FB3	1-543-644-11	s	BEAD, FERRITE (CHIP)	
FB300	1-543-309-21	s	BEAD,FERRITE	
FB301	1-543-309-21	s	BEAD,FERRITE	
FL200	1-239-069-11	s	FILTER,LOWPASS	
IC1	8-759-372-60	s	IC MIC5201-3.3BS	
IC2	8-752-078-34	s	IC CXB1342R	
IC3	8-759-456-26	s	IC 74LCX541MTCX	

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
IC4	8-759-456-26	s	IC 74LCX541MTCX
IC5	8-759-500-29	s	IC CXD8129K
IC40	8-759-491-46	s	IC TC74VHCT04AFT (EL)
IC41	8-759-523-94	s	IC TC74VHC32FT(EL)
IC42	8-759-172-72	s	IC CXD8386AQ
IC100	8-759-289-69	s	IC CXD8280AQ
IC101	8-759-389-31	s	IC 74LCX125MTCX
IC200	8-759-054-61	s	IC CLC505AJE
IC201	8-759-485-83	s	IC MC34184DR2
IC202	8-759-234-77	s	IC TC4S66F
IC203	8-759-030-16	s	IC MC34182M
IC204	8-759-030-16	s	IC MC34182M
IC205	8-759-987-27	s	IC LM1881M
IC206	8-759-054-61	s	IC CLC505AJE
IC210	8-759-035-93	s	IC SC7S32F
IC211	8-759-528-99	s	IC TC74VHC221AFT(EL)
IC212	8-759-101-12	s	IC UPC311G2
IC213	8-759-300-71	s	IC HD14053BFP
IC214	8-759-030-16	s	IC MC34182M
IC215	8-759-054-61	s	IC CLC505AJE
IC216	8-752-061-02	s	IC CXA1450M
IC217	8-759-098-16	s	IC LT1227CS8
IC218	8-759-702-08	s	IC NJM360M
IC220	8-759-523-97	s	IC TC74VHC123AFT(EL)
IC221	8-759-030-16	s	IC MC34182M
IC222	8-759-702-08	s	IC NJM360M
IC223	8-759-035-93	s	IC SC7S32F
IC300	8-759-929-26	s	IC TL431CPS
IC301	8-759-502-80	s	IC LM358M
IC302	8-759-233-66	s	IC TC74HCT04AF
IC303	8-759-523-95	s	IC TC74VHC74FT(EL)
IC304	8-752-376-32	s	IC CXD2310AR
IC305	8-752-360-44	s	IC CXK1203AR
IC306	8-759-528-99	s	IC TC74VHC221AFT(EL)
IC307	8-752-375-22	s	IC CXD304-106Q
IC308	8-759-295-09	s	IC TLC2932IPW
IC309	8-759-523-78	s	IC TC74VHC00FT(EL)
IC310	8-759-485-83	s	IC MC34184DR2
IC311	8-759-174-13	s	IC EPM7032LC44-15
IC312	8-759-300-71	s	IC HD14053BFP
IC313	8-759-196-97	s	IC TC7SH32FU (TE85R)
IC314	8-752-334-55	s	IC CXD1175AM
IC315	8-759-524-28	s	IC TC74VHC245FT(EL)
IC316	8-759-030-16	s	IC MC34182M
IC317	8-759-523-95	s	IC TC74VHC74FT(EL)
IC318	8-759-528-99	s	IC TC74VHC221AFT(EL)
IC319	8-759-523-97	s	IC TC74VHC123AFT(EL)
IC320	8-759-528-99	s	IC TC74VHC221AFT(EL)
IC321	8-759-491-45	s	IC TC74VHCT00AFT(EL)
IC400	8-759-456-24	s	IC 74LCX540MTCX
IC401	8-759-466-57	s	IC 74LCX157MTCX
IC402	8-759-559-32	s	IC 74LCX821MTCX
IC403	8-759-559-32	s	IC 74LCX821MTCX
IC450	8-759-524-50	s	IC TC74VHC541FT(EL)
IC452	8-759-559-40	s	IC MB811643242A-100FN
IC453	8-759-559-40	s	IC MB811643242A-100FN
IC454	8-759-559-40	s	IC MB811643242A-100FN
IC455	8-759-559-40	s	IC MB811643242A-100FN
IC600	8-759-523-95	s	IC TC74VHC74FT(EL)

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
IC601	8-759-252-21	s	IC EL2244CS
IC602	8-759-987-27	s	IC LM1881M
IC603	8-759-987-27	s	IC LM1881M
IC604	8-759-528-99	s	IC TC74VHC221AFT(EL)
IC605	8-759-528-99	s	IC TC74VHC221AFT(EL)
IC606	8-759-523-81	s	IC TC74VHC08FT(EL)
IC607	8-759-978-96	s	IC SN75207BNS
IC608	8-759-528-99	s	IC TC74VHC221AFT(EL)
IC609	8-759-030-16	s	IC MC34182M
IC610	8-759-702-08	s	IC NJM360M
IC700	8-759-386-28	s	IC 74LCX00MTCX
IC701	8-759-473-94	s	IC CXD9013AR
IC703	8-759-386-22	s	IC 74LCX04SJX
IC720	8-759-456-26	s	IC 74LCX541MTCX
IC721	8-759-456-26	s	IC 74LCX541MTCX
IC722	8-759-456-26	s	IC 74LCX541MTCX
IC750	8-759-929-26	s	IC TL431CPS
IC751	8-759-491-45	s	IC TC74VHCT00AFT(EL)
IC752	8-759-030-16	s	IC MC34182M
IC753	8-759-011-65	s	IC MC74HC4053F
IC754	8-759-030-16	s	IC MC34182M
IC755	8-759-389-33	s	IC 74LCX244MTCX
IC756	8-759-389-33	s	IC 74LCX244MTCX
IC800	8-759-989-91	s	IC TL7705ACPS
IC801	8-759-456-26	s	IC 74LCX541MTCX
IC802	8-759-031-84	s	IC SC7S04F
IC803	8-759-524-04	s	IC TC74VHC125FT (EL)
IC804	8-759-645-81	s	IC HD64F2132-HKPF-1125
IC805	8-759-031-84	s	IC SC7S04F
IC806	8-759-234-20	s	IC TC7S08F
IC807	8-759-399-56	s	IC STK12C68-S45
IC808	8-759-490-41	s	IC TC74VHCT541AFT(EL)
IC809	8-759-386-25	s	IC 74LCX245MTCX
IC810	8-759-456-26	s	IC 74LCX541MTCX
IC811	8-759-456-26	s	IC 74LCX541MTCX
IC812	8-759-456-26	s	IC 74LCX541MTCX
IC813	8-759-456-26	s	IC 74LCX541MTCX
IC814	8-759-456-26	s	IC 74LCX541MTCX
IC820	8-759-490-43	s	IC TC74VHCT540AFT(EL)
IC821	8-759-645-82	s	IC XC95108-UPC-SW-CNT
IC822	8-759-456-24	s	IC 74LCX540MTCX
IC823	8-759-645-80	s	IC XC95144 UPC-ASIC-CNT
IC824	8-759-389-26	s	IC 74LCX08MTCX
IC825	8-759-456-26	s	IC 74LCX541MTCX
IC830	8-759-456-26	s	IC 74LCX541MTCX
IC900	8-759-927-18	s	IC SN74HCT541NS
IC901	8-759-490-41	s	IC TC74VHCT541AFT(EL)
IC902	8-759-490-43	s	IC TC74VHCT540AFT(EL)
IC903	8-759-490-41	s	IC TC74VHCT541AFT(EL)
IC904	8-759-490-41	s	IC TC74VHCT541AFT(EL)
IC905	8-759-054-56	s	IC SN75179BPS
IC906	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC907	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC908	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC1000	8-759-371-78	s	IC LT1431CS8-E1
IC1001	8-759-261-48	s	IC TL1451ACPW (R)
IC1004	8-719-985-01	s	IC LM385M-1.2
IC1005	8-759-568-67	s	IC LM337IMP
IC1006	8-759-581-89	s	IC LM317SX

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
IC1009	8-759-245-45	s	IC TA78L09F
IC1010	8-759-446-74	s	IC TA79L05F(TE12L)
L200	1-424-642-11	s	COIL, CHOKE 47UH
L201	1-424-642-11	s	COIL, CHOKE 47UH
L202	1-410-393-11	s	CHIP INDUCTOR 100UH (3225)
L203	1-410-393-11	s	CHIP INDUCTOR 100UH (3225)
L600	1-410-393-11	s	CHIP INDUCTOR 100UH (3225)
L601	1-410-377-31	s	INDUCTOR,CHIP 4.7UH (3225)
L602	1-424-642-11	s	COIL, CHOKE 47UH
L603	1-424-642-11	s	COIL, CHOKE 47UH
L700	1-424-642-11	s	COIL, CHOKE 47UH
L750	1-424-642-11	s	COIL, CHOKE 47UH
L751	1-424-642-11	s	COIL, CHOKE 47UH
L900	1-412-027-11	s	INDUCTOR,CHIP 2.2UH (3225)
L1000	1-421-459-21	s	COIL,CHOKE
L1001	1-421-459-21	s	COIL,CHOKE
L1002	1-421-459-21	s	COIL,CHOKE
L1003	1-409-721-11	s	COIL, CHOKE 42UH
L1004	1-409-721-11	s	COIL, CHOKE 42UH
L1005	1-421-459-21	s	COIL,CHOKE
L1006	1-421-459-21	s	COIL,CHOKE
PS1000 ⚠	1-533-627-21	s	FUSE CHIP 5A/125V (6125)
PS1001 ⚠	1-532-686-21	s	CIRCUIT PROTECTOR (2.7A)
Q202	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q203	8-729-117-32	s	TRANSISTOR 2SC4177
Q204	8-729-117-32	s	TRANSISTOR 2SC4177
Q205	8-729-117-32	s	TRANSISTOR 2SC4177
Q206	8-729-117-32	s	TRANSISTOR 2SC4177
Q207	8-729-117-32	s	TRANSISTOR 2SC4177
Q208	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q209	8-729-117-32	s	TRANSISTOR 2SC4177
Q210	8-729-117-32	s	TRANSISTOR 2SC4177
Q211	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q212	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q213	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q214	8-729-118-56	s	FET 2SK852-X2
Q215	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q300	8-729-117-32	s	TRANSISTOR 2SC4177
Q301	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q302	8-729-904-41	s	TRANSISTOR FMY3
Q600	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q601	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q602	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q603	8-729-117-32	s	TRANSISTOR 2SC4177
Q604	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q605	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q606	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q1000	8-729-117-32	s	TRANSISTOR 2SC4177
Q1001	8-729-028-91	s	TRANSISTOR DTA144EUA-T106
Q1002	8-729-117-32	s	TRANSISTOR 2SC4177
Q1003	8-729-117-32	s	TRANSISTOR 2SC4177
Q1004	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q1005	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q1006	8-729-117-32	s	TRANSISTOR 2SC4177
Q1007	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q1008	8-729-117-32	s	TRANSISTOR 2SC4177
Q1009	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q1010	8-729-046-99	s	TRANSISTOR SI4562DY

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
Q1011	8-729-046-99	s	TRANSISTOR SI4562DY
R1	1-218-669-11	s	RESISTOR CHIP 110 1/16W (1608)
R2	1-218-680-11	s	RESISTOR,CHIP 330 1/16W(1608)
R3	1-218-680-11	s	RESISTOR,CHIP 330 1/16W(1608)
R4	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R5	1-218-700-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R6	1-218-684-11	s	RESISTOR CHIP 470 1/16W (1608)
R7	1-218-713-11	s	RESISTOR,METAL 7.5K 1/16W
R8	1-218-718-11	s	RESISTOR CHIP 12K 1/16W (1608)
R9	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R10	1-218-700-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R11	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R12	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R13	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R15	1-218-665-11	s	RESISTOR CHIP 75 1/16W (1608)
R16	1-218-665-11	s	RESISTOR CHIP 75 1/16W (1608)
R17	1-218-678-11	s	RESISTOR CHIP 270 1/16W (1608)
R18	1-218-668-11	s	RESISTOR,CHIP 100 1/16W (1608)
R19	1-218-668-11	s	RESISTOR,CHIP 100 1/16W (1608)
R20	1-218-668-11	s	RESISTOR,CHIP 100 1/16W (1608)
R21	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R22	1-218-660-91	s	RESISTOR CHIP 47 1/16W (1608)
R23	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R24	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R25	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R26	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R27	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R28	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R29	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R30	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R31	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R32	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R33	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R34	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R35	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R36	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R37	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R38	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R39	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R40	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R42	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R43	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R44	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R45	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R46	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R47	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R48	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R49	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R54	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R55	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R57	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R58	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R60	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R61	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R65	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R73	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R74	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R75	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R76	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R79	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R80	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R81	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R82	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R83	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R84	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R85	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R86	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R87	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R88	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R89	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R90	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R91	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R92	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R93	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R94	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R104	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R106	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R107	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R108	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R109	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R111	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R112	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R113	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R114	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R115	1-211-990-11	s	RESISTOR,CHIP 75 1/16W (1608)
R116	1-211-990-11	s	RESISTOR,CHIP 75 1/16W (1608)
R117	1-211-990-11	s	RESISTOR,CHIP 75 1/16W (1608)
R118	1-211-990-11	s	RESISTOR,CHIP 75 1/16W (1608)
R140	1-211-986-11	s	RESISTOR,CHIP 51 1/16W (1608)
R141	1-211-986-11	s	RESISTOR,CHIP 51 1/16W (1608)
R142	1-211-986-11	s	RESISTOR,CHIP 51 1/16W (1608)
R143	1-211-986-11	s	RESISTOR,CHIP 51 1/16W (1608)
R144	1-211-986-11	s	RESISTOR,CHIP 51 1/16W (1608)
R145	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R146	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R147	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R148	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R149	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R150	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R151	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R152	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R153	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R154	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R155	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R200	1-216-022-00	s	RESISTOR,CHIP 75 1/10W (2125)
R201	1-218-668-11	s	RESISTOR,CHIP 100 1/16W (1608)
R202	1-218-665-11	s	RESISTOR CHIP 75 1/16W (1608)
R203	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R204	1-218-665-11	s	RESISTOR CHIP 75 1/16W (1608)
R205	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R206	1-218-676-11	s	RESISTOR,CHIP 220 1/16W(1608)
R207	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R208	1-218-688-11	s	RESISTOR,CHIP 680 1/16W(1608)
R209	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R210	1-218-740-11	s	RESISTOR,CHIP 100K 1/16W(1608)
R212	1-218-751-11	s	RESISTOR,CHIP 300K 1/16W(1608)
R213	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R214	1-218-684-11	s	RESISTOR CHIP 470 1/16W (1608)
R215	1-218-684-11	s	RESISTOR CHIP 470 1/16W (1608)
R216	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R217	1-218-652-11	s	RESISTOR,CHIP 22 1/16W (1608)
R218	1-218-655-91	s	RESISTOR,CHIP 30 1/16W(1608)
R219	1-218-674-11	s	RESISTOR CHIP 180 1/16W (1608)
R220	1-218-690-11	s	RESISTOR CHIP 820 1/16W (1608)
R221	1-218-700-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R222	1-218-694-11	s	RESISTOR CHIP 1.2K1/16W(1608)
R223	1-218-676-11	s	RESISTOR,CHIP 220 1/16W(1608)
R224	1-218-708-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R225	1-218-668-11	s	RESISTOR,CHIP 100 1/16W (1608)
R226	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R227	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R228	1-216-663-11	s	RESISTOR,CHIP 3.3K 1/10W(2012)
R229	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R230	1-218-684-11	s	RESISTOR CHIP 470 1/16W (1608)
R231	1-216-121-91	s	RESISTOR CHIP 1M 1/10W(2125)
R232	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R233	1-218-684-11	s	RESISTOR CHIP 470 1/16W (1608)
R234	1-218-660-91	s	RESISTOR CHIP 47 1/16W (1608)
R235	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R236	1-218-724-11	s	RESISTOR,CHIP 22K 1/16W(1608)
R237	1-218-687-11	s	RESISTOR CHIP 620 1/16W (1608)
R238	1-218-700-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R239	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R240	1-218-690-11	s	RESISTOR CHIP 820 1/16W (1608)
R241	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R243	1-216-117-00	s	RESISTOR,CHIP 680K 1/10W(2012)
R244	1-218-711-11	s	RESISTOR,METAL 6.2K 1/16W
R245	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R246	1-218-660-91	s	RESISTOR CHIP 47 1/16W (1608)
R247	1-218-732-11	s	RESISTOR,CHIP 47K 1/16W(1608)
R248	1-216-652-11	s	RESISTOR,CHIP 1.1K 1/10W(2012)
R249	1-218-697-11	s	RESISTOR,CHIP 1.6K 1/16W(1608)
R250	1-218-702-11	s	RESISTOR CHIP 2.7K 1/16W(1608)
R251	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R252	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R253	1-218-725-11	s	RESISTOR,CHIP 24K 1/16W(1608)
R254	1-218-702-11	s	RESISTOR CHIP 2.7K 1/16W(1608)
R255	1-218-708-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R256	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R257	1-218-700-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R258	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R259	1-218-722-11	s	RESISTOR, CHIP 18K 1/16W 1608
R260	1-216-133-00	s	RESISTOR,CHIP 3.3M 1/10W(2012)
R261	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R262	1-218-709-11	s	RESISTOR,METAL 5.1K 1/16W
R263	1-218-751-11	s	RESISTOR,CHIP 300K 1/16W(1608)
R264	1-218-700-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R265	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R266	1-218-702-11	s	RESISTOR CHIP 2.7K 1/16W(1608)
R268	1-216-121-91	s	RESISTOR CHIP 1M 1/10W(2125)
R269	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R270	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R271	1-218-696-11	s	RESISTOR CHIP 1.5K 1/16W(1608)
R273	1-218-665-11	s	RESISTOR CHIP 75 1/16W (1608)
R274	1-218-708-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R275	1-218-660-91	s	RESISTOR CHIP 47 1/16W (1608)

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R276	1-218-708-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R277	1-218-722-11	s	RESISTOR, CHIP 18K 1/16W 1608
R278	1-218-704-11	s	RESISTOR,CHIP 3.3K 1/16W(1608)
R279	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R280	1-218-696-11	s	RESISTOR CHIP 1.5K 1/16W(1608)
R281	1-218-708-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R282	1-218-712-11	s	RESISTOR,METAL 6.8K 1/16W
R283	1-218-714-11	s	RESISTOR,CHIP 8.2K 1/16W(1608)
R284	1-218-668-11	s	RESISTOR,CHIP 100 1/16W (1608)
R285	1-218-700-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R286	1-218-676-11	s	RESISTOR,CHIP 220 1/16W(1608)
R287	1-218-711-11	s	RESISTOR,METAL 6.2K 1/16W
R288	1-218-711-11	s	RESISTOR,METAL 6.2K 1/16W
R289	1-218-697-11	s	RESISTOR,CHIP 1.6K 1/16W(1608)
R290	1-218-696-11	s	RESISTOR CHIP 1.5K 1/16W(1608)
R291	1-218-740-11	s	RESISTOR,CHIP 100K 1/16W(1608)
R293	1-218-708-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R294	1-218-751-11	s	RESISTOR,CHIP 300K 1/16W(1608)
R295	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R296	1-218-688-11	s	RESISTOR,CHIP 680 1/16W(1608)
R300	1-218-676-11	s	RESISTOR,CHIP 220 1/16W(1608)
R301	1-218-687-11	s	RESISTOR CHIP 620 1/16W (1608)
R302	1-218-701-11	s	RESISTOR,CHIP 2.4K 1/16W(1608)
R303	1-218-713-11	s	RESISTOR,METAL 7.5K 1/16W
R304	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R305	1-218-823-11	s	RESISTOR,CHIP 100 1/16W (1608)
R306	1-218-728-11	s	RESISTOR,METAL 33K 1/16W
R307	1-218-726-11	s	RESISTOR CHIP 27K 1/16W (1608)
R308	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R309	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R310	1-218-665-11	s	RESISTOR CHIP 75 1/16W (1608)
R311	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R312	1-218-676-11	s	RESISTOR,CHIP 220 1/16W(1608)
R313	1-218-676-11	s	RESISTOR,CHIP 220 1/16W(1608)
R314	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R316	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R317	1-218-668-11	s	RESISTOR,CHIP 100 1/16W (1608)
R318	1-218-676-11	s	RESISTOR,CHIP 220 1/16W(1608)
R319	1-218-688-11	s	RESISTOR,CHIP 680 1/16W(1608)
R320	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R321	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R322	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R323	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R324	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R328	1-218-711-11	s	RESISTOR,METAL 6.2K 1/16W
R329	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R330	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R331	1-218-672-11	s	RESISTOR,CHIP 150 1/16W(1608)
R332	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R333	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R334	1-218-684-11	s	RESISTOR CHIP 470 1/16W (1608)
R335	1-218-684-11	s	RESISTOR CHIP 470 1/16W (1608)
R336	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R337	1-218-737-11	s	RESISTOR,METAL 75K 1/16
R338	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R339	1-218-724-11	s	RESISTOR,CHIP 22K 1/16W(1608)
R340	1-218-741-11	s	RESISTOR,CHIP 110K 1/16W(1608)
R341	1-218-718-11	s	RESISTOR CHIP 12K 1/16W (1608)
R342	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R343	1-218-740-11	s	RESISTOR,CHIP 100K 1/16W(1608)
R344	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R345	1-218-728-11	s	RESISTOR,METAL 33K 1/16W
R346	1-218-715-11	s	RESISTOR,METAL 9.1K 1/16W
R347	1-218-724-11	s	RESISTOR,CHIP 22K 1/16W(1608)
R349	1-218-720-11	s	RESISTOR,CHIP 15K 1/16W(1608)
R350	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R351	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R352	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R353	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R354	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R355	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R357	1-218-660-91	s	RESISTOR CHIP 47 1/16W (1608)
R358	1-218-660-91	s	RESISTOR CHIP 47 1/16W (1608)
R359	1-218-660-91	s	RESISTOR CHIP 47 1/16W (1608)
R360	1-218-676-11	s	RESISTOR,CHIP 220 1/16W(1608)
R361	1-218-688-11	s	RESISTOR,CHIP 680 1/16W(1608)
R362	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R363	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R364	1-218-724-11	s	RESISTOR,CHIP 22K 1/16W(1608)
R365	1-218-728-11	s	RESISTOR,METAL 33K 1/16W
R366	1-218-672-11	s	RESISTOR,CHIP 150 1/16W(1608)
R367	1-218-672-11	s	RESISTOR,CHIP 150 1/16W(1608)
R368	1-218-732-11	s	RESISTOR,CHIP 47K 1/16W(1608)
R369	1-218-672-11	s	RESISTOR,CHIP 150 1/16W(1608)
R370	1-218-732-11	s	RESISTOR,CHIP 47K 1/16W(1608)
R371	1-218-729-11	s	RESISTOR,CHIP 36K 1/16W(1608)
R372	1-218-720-11	s	RESISTOR,CHIP 15K 1/16W(1608)
R373	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R374	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R375	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R376	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R377	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R378	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R379	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R380	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R381	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R382	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R383	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R384	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R385	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R386	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R387	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R388	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R389	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R390	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R392	1-218-776-11	s	RESISTOR CHIP 1M 1/10W (2012)
R400	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R401	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R402	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R403	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R404	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R405	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R406	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R407	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R408	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R409	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R410	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R411	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R412	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R413	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R414	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R415	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R416	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R417	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R418	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R419	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R420	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R421	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R422	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R423	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R424	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R425	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R426	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R427	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R428	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R429	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R430	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R431	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R432	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R433	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R434	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R435	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R436	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R437	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R438	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R439	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R440	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R441	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R442	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R443	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R444	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R445	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R446	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R447	1-216-686-11	s	RESISTOR, METAL FILM 30K 1/10W
R448	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2012)
R449	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R450	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R453	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R454	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R455	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R456	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R600	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R601	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R602	1-218-690-11	s	RESISTOR CHIP 820 1/16W (1608)
R603	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R604	1-218-677-11	s	RESISTOR,CHIP 240 1/16W (1608)
R605	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R606	1-218-701-11	s	RESISTOR,CHIP 2.4K 1/16W(1608)
R607	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R608	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R609	1-218-710-11	s	RESISTOR,CHIP 5.6K 1/16W(1608)
R610	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R611	1-218-700-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R612	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R613	1-216-133-00	s	RESISTOR,CHIP 3.3M 1/10W(2012)
R614	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R615	1-218-702-11	s	RESISTOR CHIP 2.7K 1/16W(1608)

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R616	1-218-704-11	s	RESISTOR,CHIP 3.3K 1/16W(1608)
R617	1-218-668-11	s	RESISTOR,CHIP 100 1/16W (1608)
R618	1-218-700-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R619	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R620	1-216-133-00	s	RESISTOR,CHIP 3.3M 1/10W(2012)
R622	1-218-708-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R623	1-216-133-00	s	RESISTOR,CHIP 3.3M 1/10W(2012)
R624	1-218-668-11	s	RESISTOR,CHIP 100 1/16W (1608)
R625	1-218-668-11	s	RESISTOR,CHIP 100 1/16W (1608)
R626	1-218-700-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R627	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R628	1-218-703-11	s	RESISTOR,METAL 3.0K 1/16(1608)
R629	1-218-776-11	s	RESISTOR CHIP 1M 1/10W (2012)
R630	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R631	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R632	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R633	1-218-708-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R634	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R635	1-218-755-11	s	RESISTOR,CHIP 130K1/10W(2012)
R700	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R701	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R702	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R703	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R704	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R706	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R707	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R708	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R709	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R710	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R711	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R712	1-218-740-11	s	RESISTOR,CHIP 100K 1/16W(1608)
R714	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R715	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R716	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R717	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R720	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R721	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R722	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R723	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R724	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R725	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R726	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R727	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R728	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R729	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R730	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R731	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R732	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R733	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R734	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R735	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R736	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R737	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R738	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R739	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R740	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R741	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R742	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R743	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R750	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R751	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R752	1-218-668-11	s	RESISTOR,CHIP 100 1/16W (1608)
R753	1-218-700-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R754	1-218-704-11	s	RESISTOR,CHIP 3.3K 1/16W(1608)
R755	1-218-668-11	s	RESISTOR,CHIP 100 1/16W (1608)
R756	1-218-724-11	s	RESISTOR,CHIP 22K 1/16W(1608)
R757	1-218-740-11	s	RESISTOR,CHIP 100K 1/16W(1608)
R758	1-218-676-11	s	RESISTOR,CHIP 220 1/16W(1608)
R759	1-218-689-11	s	RESISTOR CHIP 750 1/16W (1608)
R760	1-218-718-11	s	RESISTOR CHIP 12K 1/16W (1608)
R761	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R762	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R763	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R764	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R765	1-218-668-11	s	RESISTOR,CHIP 100 1/16W (1608)
R766	1-218-668-11	s	RESISTOR,CHIP 100 1/16W (1608)
R767	1-218-724-11	s	RESISTOR,CHIP 22K 1/16W(1608)
R768	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R769	1-218-724-11	s	RESISTOR,CHIP 22K 1/16W(1608)
R770	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R771	1-218-718-11	s	RESISTOR CHIP 12K 1/16W (1608)
R772	1-218-718-11	s	RESISTOR CHIP 12K 1/16W (1608)
R773	1-218-740-11	s	RESISTOR,CHIP 100K 1/16W(1608)
R774	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R775	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R776	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R777	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R778	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R779	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R800	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R801	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R802	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R803	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R804	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R805	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R806	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R807	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R808	1-218-732-11	s	RESISTOR,CHIP 47K 1/16W(1608)
R809	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R810	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R811	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R814	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R815	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R816	1-218-732-11	s	RESISTOR,CHIP 47K 1/16W(1608)
R817	1-218-732-11	s	RESISTOR,CHIP 47K 1/16W(1608)
R818	1-218-732-11	s	RESISTOR,CHIP 47K 1/16W(1608)
R819	1-218-732-11	s	RESISTOR,CHIP 47K 1/16W(1608)
R820	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R821	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R822	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R823	1-218-732-11	s	RESISTOR,CHIP 47K 1/16W(1608)
R824	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R827	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R828	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R829	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R830	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R831	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R832	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R833	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R834	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R835	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R836	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R837	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R838	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R839	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R840	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R841	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R842	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R843	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R846	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R847	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R848	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R849	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R850	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R851	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R852	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R853	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R854	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R855	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R856	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R857	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R858	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R859	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R860	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R861	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R862	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R863	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R864	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R865	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R866	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R867	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R868	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R869	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R870	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R871	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R872	1-218-661-11	s	RESISTOR,CHIP 51 1/16W (1608)
R873	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R874	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R875	1-218-716-11	s	RESISTOR,CHIP 10K 1/16W(1608)
R876	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R877	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R878	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R879	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R880	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R881	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R882	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R883	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R900	1-218-732-11	s	RESISTOR,CHIP 47K 1/16W(1608)
R901	1-218-724-11	s	RESISTOR,CHIP 22K 1/16W(1608)
R902	1-218-724-11	s	RESISTOR,CHIP 22K 1/16W(1608)
R903	1-218-692-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R904	1-218-644-11	s	RESISTOR,METAL 10 1/16W
R905	1-218-644-11	s	RESISTOR,METAL 10 1/16W
R906	1-218-700-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R907	1-218-700-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R908	1-218-668-11	s	RESISTOR,CHIP 100 1/16W (1608)
R909	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R910	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R911	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R912	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R913	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R1000	1-216-627-11	s	RESISTOR,CHIP 100 1/10W (2012)
R1001	1-216-654-11	s	RESISTOR CHIP 1.3K1/10W (2012
R1002	1-216-654-11	s	RESISTOR CHIP 1.3K1/10W (2012
R1003	1-216-635-11	s	RESISTOR CHIP 220 1/10W (2012)
R1004	1-216-654-11	s	RESISTOR CHIP 1.3K1/10W (2012
R1005	1-216-693-11	s	RESISTOR CHIP 56K 1/10W (2012)
R1006	1-216-677-11	s	RESISTOR,CHIP 12K 1/10W(2012)
R1008	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2012)
R1009	1-216-687-11	s	RESISTOR CHIP 33K 1/10W (2012)
R1010	1-216-691-11	s	RESISTOR CHIP 47K 1/10W(2012)
R1011	1-216-687-11	s	RESISTOR CHIP 33K 1/10W (2012)
R1012	1-216-691-11	s	RESISTOR CHIP 47K 1/10W(2012)
R1013	1-216-675-11	s	RESISTOR CHIP 10K 1/10W(2012)
R1014	1-216-675-11	s	RESISTOR CHIP 10K 1/10W(2012)
R1015	1-216-675-11	s	RESISTOR CHIP 10K 1/10W(2012)
R1016	1-216-675-11	s	RESISTOR CHIP 10K 1/10W(2012)
R1017	1-216-627-11	s	RESISTOR,CHIP 100 1/10W (2012)
R1018	1-216-627-11	s	RESISTOR,CHIP 100 1/10W (2012)
R1019	1-216-671-11	s	RESISTOR,CHIP 6.8K 1/10W(2012)
R1020	1-216-675-11	s	RESISTOR CHIP 10K 1/10W(2012)
R1021	1-216-678-11	s	RESISTOR,CHIP 13K 1/10W(2012)
R1022	1-216-697-91	s	RESISTOR CHIP METAL OXIDE 82K
R1023	1-218-718-11	s	RESISTOR CHIP 12K 1/16W (1608)
R1024	1-218-718-11	s	RESISTOR CHIP 12K 1/16W (1608)
R1025	1-216-675-11	s	RESISTOR CHIP 10K 1/10W(2012)
R1026	1-216-675-11	s	RESISTOR CHIP 10K 1/10W(2012)
R1027	1-216-689-11	s	RESISTOR,CHIP 39K 1/10W(2012)
R1028	1-216-635-11	s	RESISTOR CHIP 220 1/10W (2012)
R1029	1-216-635-11	s	RESISTOR CHIP 220 1/10W (2012)
R1030	1-216-341-11	s	RESISTOR,METAL FILM 0.22/1W
R1031	1-216-347-11	s	RESISTOR,METAL FILM 0.68/1W
R1032	1-216-627-11	s	RESISTOR,CHIP 100 1/10W (2012)
R1033	1-216-627-11	s	RESISTOR,CHIP 100 1/10W (2012)
R1034	1-216-653-11	s	RESISTOR CHIP 1.2K 1/10W(2012)
R1035	1-216-684-91	s	RESISTOR METAL FILM CHIP 24K
R1036	1-216-653-11	s	RESISTOR CHIP 1.2K 1/10W(2012)
R1037	1-216-684-91	s	RESISTOR METAL FILM CHIP 24K
R1038	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2012)
R1039	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2012)
R1040	1-216-659-11	s	RESISTOR,CHIP 2.2K 1/10W(2012)
R1041	1-216-679-11	s	RESISTOR CHIP 15K 1/10W (2012)
R1042	1-216-659-11	s	RESISTOR,CHIP 2.2K 1/10W(2012)
R1043	1-216-679-11	s	RESISTOR CHIP 15K 1/10W (2012)
R1044	1-218-660-91	s	RESISTOR CHIP 47 1/16W (1608)
R1045	1-216-627-11	s	RESISTOR,CHIP 100 1/10W (2012)
R1046	1-218-660-91	s	RESISTOR CHIP 47 1/16W (1608)
R1047	1-216-627-11	s	RESISTOR,CHIP 100 1/10W (2012)
R1048	1-216-675-11	s	RESISTOR CHIP 10K 1/10W(2012)
R1049	1-216-675-11	s	RESISTOR CHIP 10K 1/10W(2012)
R1050	1-216-675-11	s	RESISTOR CHIP 10K 1/10W(2012)
R1051	1-216-675-11	s	RESISTOR CHIP 10K 1/10W(2012)
R1052	1-216-639-11	s	RESISTOR,CHIP 330 1/10W (2012)
R1053	1-216-634-11	s	RESISTOR,CHIP 200 1/10W(2012)
R1055	1-216-660-11	s	RESISTOR,CHIP 2.4K 1/10W(2012)
R1056	1-218-665-11	s	RESISTOR CHIP 75 1/16W (1608)

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R1057	1-216-629-11	s	RESISTOR,CHIP 120 1/10W (2012)
R1058	1-216-636-11	s	RESISTOR CHIP 240 1/10W (2012)
RB1	1-239-412-11	s	NETWORK, RESISTOR 100 (1608)
RB2	1-239-412-11	s	NETWORK, RESISTOR 100 (1608)
RB3	1-239-412-11	s	NETWORK, RESISTOR 100 (1608)
RB100	1-239-711-11	s	NETWORK, RESISTOR 0 (1608)
RB800	1-239-412-11	s	NETWORK, RESISTOR 100 (1608)
RB801	1-239-308-11	s	RESISTOR ARRAY,CHIP 47K
RB802	1-239-308-11	s	RESISTOR ARRAY,CHIP 47K
RB803	1-239-412-11	s	NETWORK, RESISTOR 100 (1608)
RB804	1-239-412-11	s	NETWORK, RESISTOR 100 (1608)
RB805	1-239-306-11	s	RESISTOR ARRAY,CHIP 10K
RB806	1-239-308-11	s	RESISTOR ARRAY,CHIP 47K
RB807	1-239-308-11	s	RESISTOR ARRAY,CHIP 47K
RB808	1-239-308-11	s	RESISTOR ARRAY,CHIP 47K
RB809	1-239-308-11	s	RESISTOR ARRAY,CHIP 47K
RB810	1-239-308-11	s	RESISTOR ARRAY,CHIP 47K
RB811	1-239-307-11	s	RESISTOR ARRAY,CHIP 22K
RB812	1-239-711-11	s	NETWORK, RESISTOR 0 (1608)
RB813	1-239-711-11	s	NETWORK, RESISTOR 0 (1608)
RB900	1-239-305-11	s	RESISTOR ARRAY,CHIP 4.7K
RB901	1-239-416-11	s	NETWORK,RESISTOR 220 (1608)
RB902	1-239-416-11	s	NETWORK,RESISTOR 220 (1608)
RB903	1-239-308-11	s	RESISTOR ARRAY,CHIP 47K
RB904	1-239-305-11	s	RESISTOR ARRAY,CHIP 4.7K
RB905	1-239-305-11	s	RESISTOR ARRAY,CHIP 4.7K
RB906	1-239-308-11	s	RESISTOR ARRAY,CHIP 47K
RB907	1-236-904-11	s	RESISTOR NETWORK 1K (1608)
RB908	1-236-904-11	s	RESISTOR NETWORK 1K (1608)
RV1	1-237-034-11	s	RESISTOR,ADJ,CERMET 2K
RV2	1-237-034-11	s	RESISTOR,ADJ,CERMET 2K
RV200	1-237-036-11	s	RESISTOR, ADJ,CERMET 10K
RV300	1-237-034-11	s	RESISTOR,ADJ,CERMET 2K
RV301	1-237-032-11	s	RESISTOR,ADJ,CERMET 500
RV750	1-237-033-11	s	RESISTOR,ADJ,CERMET 1K
RV1000	1-237-029-11	s	RESISTOR,ADJ,CERMET 50
S1	1-762-118-21	s	SWITCH, TOGGLE
S2	1-762-118-21	s	SWITCH, TOGGLE
S3	1-762-118-21	s	SWITCH, TOGGLE
S4	1-692-530-11	s	SWITCH,TOGGLE
S5	1-762-118-21	s	SWITCH, TOGGLE
S6	1-554-963-21	s	SWITCH, ROTARY (S-1011A)
S7	1-554-963-21	s	SWITCH, ROTARY (S-1011A)
S8	1-554-963-21	s	SWITCH, ROTARY (S-1011A)
S800	1-572-438-11	s	SWITCH, TACTIL
S801	1-570-711-11	s	SWITCH,SLIDE
S900	1-570-711-11	s	SWITCH,SLIDE
S901	1-570-711-11	s	SWITCH,SLIDE
S902	1-570-711-11	s	SWITCH,SLIDE
S903	1-570-711-11	s	SWITCH,SLIDE
S904	1-570-711-11	s	SWITCH,SLIDE
S905	1-570-711-11	s	SWITCH,SLIDE
S906	1-570-711-11	s	SWITCH,SLIDE
S907	1-570-711-11	s	SWITCH,SLIDE
S908	1-570-710-11	s	SWITCH,SLIDE
S909	1-570-710-11	s	SWITCH,SLIDE
S910	1-570-711-11	s	SWITCH,SLIDE

(DPR-117 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
S911	1-570-711-11	s	SWITCH,SLIDE
S912	1-692-271-31	s	SWITCH, SLIDE
S913	1-572-658-21	s	SWITCH,ROTARY
S914	1-572-658-21	s	SWITCH,ROTARY
S915	1-572-658-21	s	SWITCH,ROTARY
S916	1-572-658-21	s	SWITCH,ROTARY
S922	1-572-658-21	s	SWITCH,ROTARY
S923	1-572-658-21	s	SWITCH,ROTARY
S926	1-572-658-21	s	SWITCH,ROTARY
S927	1-572-658-21	s	SWITCH,ROTARY
S929	1-572-658-21	s	SWITCH,ROTARY
S930	1-572-658-21	s	SWITCH,ROTARY
TH1000	1-809-354-11	s	THERMISTOR,NTC (2125)
TH1001	1-809-354-11	s	THERMISTOR,NTC (2125)
X300	1-767-618-11	s	OSCILLATOR, CRYSTAL
X750	1-767-329-11	s	OSCILLATOR, CRYSTAL
X751	1-767-694-11	s	OSCILLATOR, CRYSTAL
X752	1-781-496-11	s	OSCILLATOR, CRYSTAL
X800	1-579-594-11	s	VIBRATOR, CRYSTAL

http://getMANUAL.com

Section 6
Semiconductor Pin Assignments

The semiconductors in the manual are listed by equivalent types. Thus the external view or the index mark indication may differ from the actual type.
In some cases incompatible types are also listed, therefore, when a part is to be replaced, also refer to the Spare Parts section.
Pin assignments and block diagrams are based on the IC manufacturer's data book.

ここに記載されている半導体は，それぞれの機能を等価的に表わしたものです。
外観やインデックスマークの表示方法が実物と異なる場合があります。
なお，互換性のない型名を併記している場合がありますので，部品を交換するときは，Spare Partsの章を参照してください。
ピン配置およびブロック図はICメーカーのデータブックに従いました。

DIODE Page

1S2837-T1 6-2
1SS123-T1 6-2
1SS184 6-2
1SS226 6-2

DA204U 6-2
DA204UT106 6-2

EA30QS04-F 6-2
EA30QS04-TE16F2 6-2
EC10DS2 6-2
EC10DS2-TE12L5 6-2

RB420D 6-2
RD3.3M-B 6-2
RD3.3M-T1B 6-2
RD4.7M-B 6-2
RD4.7M-T1B 6-2

SB02-03C-TB 6-2

LED Page

HLMP-6300-010 6-2
HLMP-6500-010 6-2

TRANSISTOR Page

2SA1610-T1Y33 6-2
2SA1610-Y33 6-2
2SA1611-M5M6 6-2
2SA1611T1-M5M6 6-2
2SC4177-L6 6-2
2SC4177-T1L5L6 6-2
2SK852-T1X2 6-2
2SK852-X2 6-2

DTA144EUA-T106 6-2

FMY3 6-2
FMY3-T-148 6-2

SI4562DY 6-2

IC Page

74LCX00MTCX 6-3
74LCX04SJX 6-3
74LCX08MTCX 6-3
74LCX125MTCX 6-3
74LCX157MTCX 6-3
74LCX244MTCX 6-3
74LCX245MTCX 6-4
74LCX540MTCX 6-4
74LCX541MTCX 6-4
74LCX821MTCX 6-4

CLC505AJE 6-5
CLC505AJE-T 6-5
CXA1450M-TH 6-5
CXA1451M 6-5
CXA1451M-TH 6-5
CXB1340N 6-5
CXB1342R 6-6
CXD1175AM-TH 6-7
CXD2310AR-T4 6-5
CXD304-106Q 6-8
CXD8129K 6-9
CXD8280AQ 6-7
CXD8386AQ 6-10
CXD8819AQ 6-12
CXD9000CR 6-11
CXD9013AR 6-11
CXD9079GB 6-16
CXG8003Q 6-15
CXK1203AR 6-16
CXK1203AR-T4 6-16

EL2244CS 6-16
EL2244CS-TE2 6-16

HD64F2132FA20 6-14

LM1881M 6-18
LM1881MX 6-18
LM317SX 6-18
LM337IMP 6-18
LM358M 6-16
LM358M-FL63 6-16
LM385M-1.2 6-18
LM385MX-1.2 6-18
LT1227CS8 6-18

IC Page

LT1227CS8-E2 6-18
LT1431CS8-E1 6-18

MB811643242A-100FN ... 6-19
MC10EL11DR2 6-18
MC10EL16DR2 6-18
MC10EL52DR2 6-19
MC10H124M 6-19
MC10H124MEL 6-19
MC14053BF 6-19
MC34182DR2 6-19
MC34182M 6-19
MC34184DR2 6-19
MC74HC4053FEL 6-20
MIC5201-3.3BS 6-20

NJM360M 6-20
NJM360M-TE2 6-20

SC7S04F 6-20
SC7S32F 6-20
SN74HCT541ANS 6-4
SN74HCT541ANSR 6-4
SN75179BPS 6-20
SN75179BPS-E05 6-20
SN75207BNS 6-20
SN75207BNS-E05 6-20
STK12C68-S45 6-21

TA78L09F 6-21
TC4S66F 6-21
TC4S66F(TE85R) 6-21
TC74HC4053AFT(EL) ... 6-20
TC74HCT04AF 6-3
TC74HCT04AF(EL) 6-3
TC74VHC00FT(EL) 6-3
TC74VHC08FT(EL) 6-3
TC74VHC123AFT(EL) ... 6-21
TC74VHC125FT(EL) 6-3
TC74VHC221AFT(EL) ... 6-21
TC74VHC245FT(EL) 6-4
TC74VHC32FT(EL) 6-21
TC74VHC541FT(EL) 6-4
TC74VHC74FT(EL) 6-22
TC74VHCT00AFT(EL) 6-3
TC74VHCT04AFT(EL) 6-3

IC Page

TC74VHCT540AFT(EL) ... 6-4
TC74VHCT541AFT(EL) ... 6-4
TC7S04F(TE85R) 6-20
TC7S08F 6-22
TC7S08F(TE85R) 6-22
TC7S32F(TE85R) 6-20
TC7SH32FU-TE85R 6-20
TL1451ACPWR 6-22
TL431CPS 6-22
TL431CPSR 6-22
TL7705ACPS 6-22
TL7705ACPSR 6-22
TLC272CPW-E05 6-22
TLC2932IPW-E20 6-23

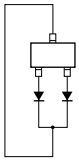
UPA102G 6-23
UPC311G2 6-23
UPC311G2-E2 6-23

XC95108-15TQ100C 6-23
XC95144-10TQ100C 6-24

Diode, LED, Transistor

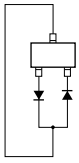
DIODE

—TOP VIEW—



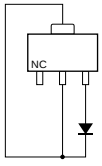
1S2837-T1
1SS184

—TOP VIEW—

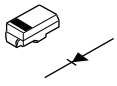


1SS123-T1
1SS226
DA204U
DA204UT106
RB420D
SB02-03C-TB

—TOP VIEW—



EA30QS04-F
EA30QS04-TE16F2

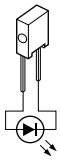


EC10DS2
EC10DS2-TE12L5

—TOP VIEW—

RD3.3M-B
RD3.3M-T1B
RD4.7M-B
RD4.7M-T1B

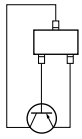
LED



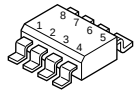
HLMP-6300-010
HLMP-6500-010

TRANSISTOR

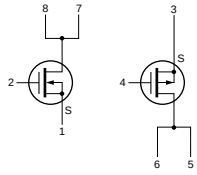
—TOP VIEW—



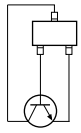
2SA1610-T1Y33
2SA1610-Y33
2SA1611-M5M6
2SA1611T1-M5M6



SI4562DY

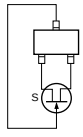


—TOP VIEW—



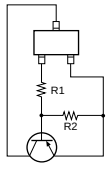
2SC4177-L6
2SC4177-T1L5L6

—TOP VIEW—



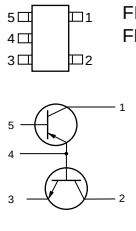
2SK852-T1X2
2SK852-X2

—TOP VIEW—



DTA144EUA-T106
(R1=47k,R2=47k)

—TOP VIEW—

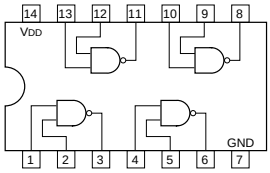


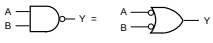
FMY3
FMY3-T-148

IC

74LCX00MTCX (NS)
TC74VHC00FT(EL) (TOSHIBA)
TC74VHCT00AFT(EL) (TOSHIBA)

C-MOS QUAD 2-INPUT NAND GATES
—TOP VIEW—





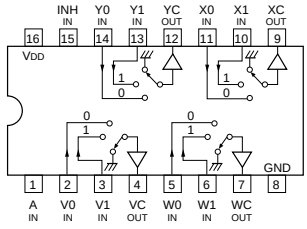
$Y = \overline{A \cdot B} = \overline{A} + \overline{B}$

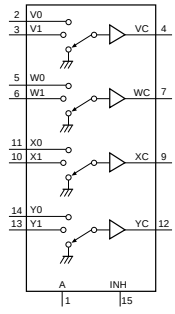
A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

74LCX157MTCX (NS)

C-MOS QUAD 2-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER
—TOP VIEW—



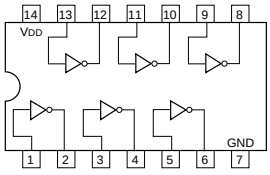


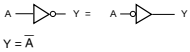
CONT. IN		ON CHANNEL
INH	A	
0	0	0
0	1	1
1	×	GND

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

74LCX04SJX (NS)
TC74HCT04AF (TOSHIBA)
TC74HCT04AF(EL)
TC74VHCT04AFT(EL) (TOSHIBA)

C-MOS HEX INVERTERS
—TOP VIEW—





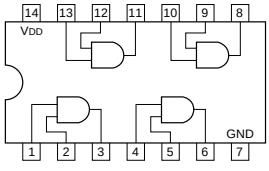
$Y = \overline{A}$

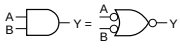
A	Y
0	1
1	0

0 : LOW LEVEL
1 : HIGH LEVEL

74LCX08MTCX (NS)
TC74VHC08FT(EL) (TOSHIBA)

C-MOS QUAD 2-INPUT AND GATES
—TOP VIEW—





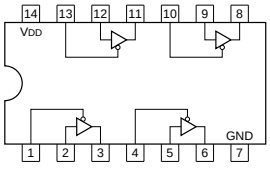
$Y = A \cdot B = \overline{\overline{A} + \overline{B}}$

A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

0 : LOW LEVEL
1 : HIGH LEVEL

74LCX125MTCX (NS)
TC74VHC125FT(EL) (TOSHIBA)

C-MOS BUS BUFFER GATES WITH 3-STATE OUTPUT
—TOP VIEW—

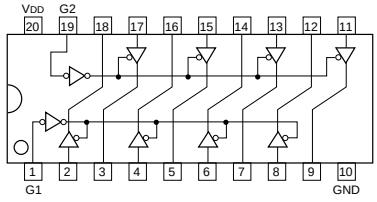


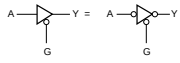
G	A	Y
0	0	0
0	1	1
1	×	HI-Z

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE
HI-Z : HIGH IMPEDANCE

74LCX244MTCX (NS)

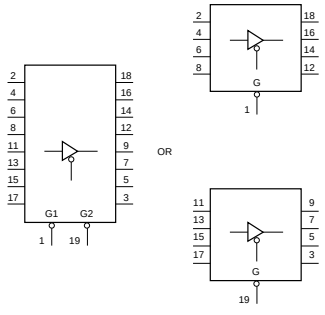
BUS BUFFER WITH 3-STATE OUTPUTS
—TOP VIEW—





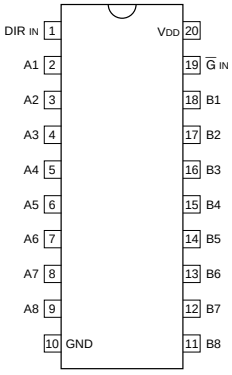
G	A	Y
0	0	0
0	1	1
1	×	HI-Z

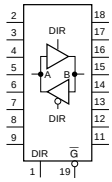
0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE
HI-Z : HIGH IMPEDANCE



74LCX245MTCX (NS)
TC74VHC245FT(EL) (TOSHIBA)

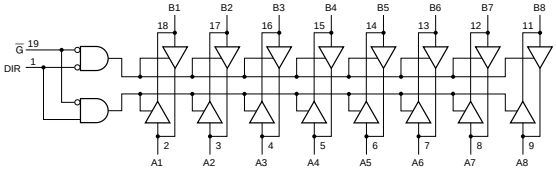
OCTAL BUS TRANSCEIVER WITH 3-STATE OUTPUTS
—TOP VIEW—





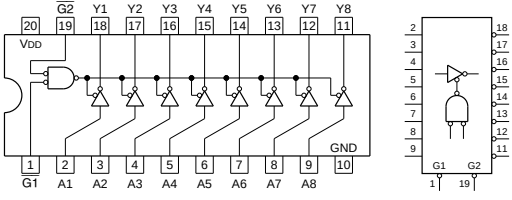
G	DIR	OPERATION
0	0	B to A
0	1	A to B
1	×	HI-Z

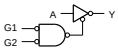
0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE
HI-Z : HIGH IMPEDANCE



74LCX540MTCX (NS)
TC74VHCT540AFT(EL) (TOSHIBA)

C-MOS 3-STATE OCTAL INVERTING BUFFERS/DRIVERS
—TOP VIEW—



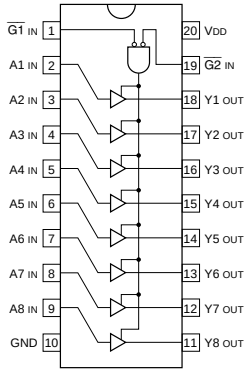


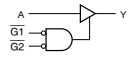
G1	G2	A	Y
0	0	0	1
0	0	1	0
1	×	×	HI-Z
×	1	×	HI-Z

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE
HI-Z : HIGH IMPEDANCE

74LCX541MTCX (NS)
SN74HCT541ANS (TI)
SN74HCT541ANSR
TC74VHC541FT(EL) (TOSHIBA)
TC74VHCT541AFT(EL) (TOSHIBA)

OCTAL BUS BUFFER WITH 3-STATE OUTPUTS
—TOP VIEW—



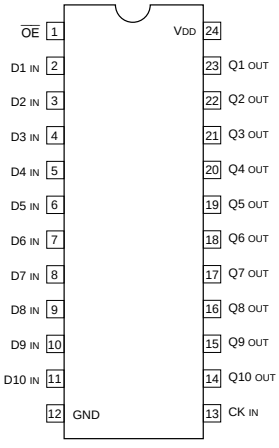


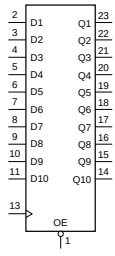
G1	G2	A	Y
0	0	0	0
0	0	1	1
1	×	×	HI-Z
×	1	×	HI-Z

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE
HI-Z : HIGH IMPEDANCE

74LCX821MTCX (NS)

C-MOS 10-BIT BUS INTERFACE FLIP-FLOPS WITH 3-STATE OUTPUTS
—TOP VIEW—



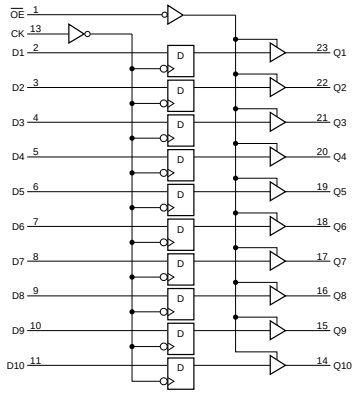


FUNCTION TABLE (EACH FLIP-FLOP)

INPUTS			OUTPUTS
OE	CK	D	Q
0	↑	1	1
0	↑	0	0
0	0	×	Q_0
1	×	×	HI-Z

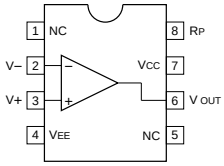
0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE
HI-Z : HIGH IMPEDANCE

LOGIC DIAGRAM (POSITIVE LOGIC)



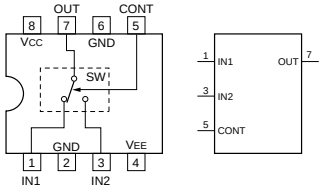
CLC505AJE (COMLINEAR)
CLC505AJE-T

OPERATIONAL AMPLIFIER
—TOP VIEW—



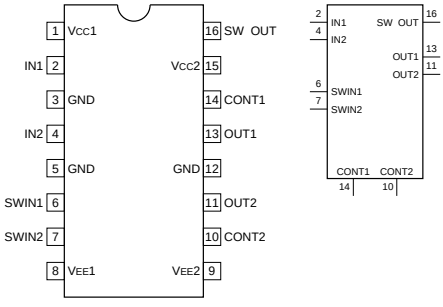
CXA1450M-TH (SONY)

VIDEO SIGNAL SWITCH
—TOP VIEW—



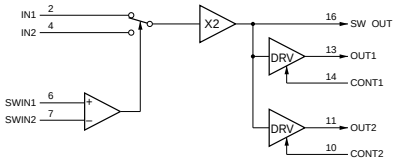
CXA1451M (SONY)
CXA1451M-TH

WIDEBAND VIDEO SWITCH
—TOP VIEW—



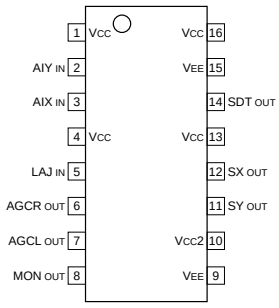
INPUT
CONT1, 2 : POWER SAVE CONTROL PIN OF DRV. 1 AND DRV. 2
INT1, 2 : 1/2-CHANNEL INPUT PIN
SWIN1, 2 : IN1/IN2 PINS SWITCH CONTROL PIN

OUTPUT
OUT1, 2 : OUTPUT PIN OF DRV. 1/2
SWOUT : OUTPUTS IN1 PIN OR IN2 PIN WHICH HAS BEEN SELECTED BY SWITCH



CXB1340N (SONY)

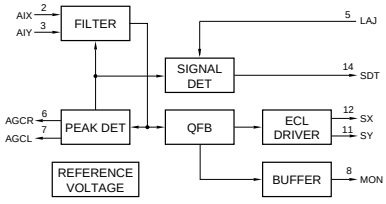
EQUALIZER
—TOP VIEW—



INPUT
AIX : SERIAL X
AIY : SERIAL Y
LAJ : INPUT SIGNAL DETECT LEVEL ADJUST

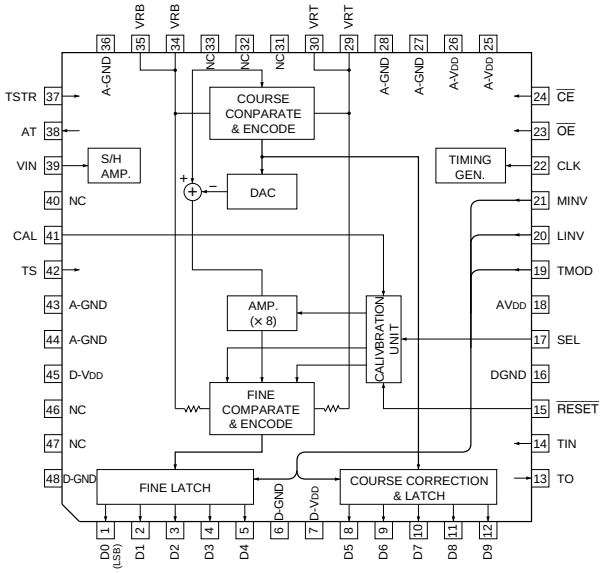
OUTPUT
AGCL : DETECTOR LEVEL
AGCR : DETECTOR REFERENCE LEVEL
MON : EQUALIZED SIGNAL
SDT : INPUT SIGNAL DETECT
SX : SERIAL X
SY : SERIAL Y

OTHER
VCC2 : FOR SERIAL OUTPUT



CXD2310AR-T4 (SONY)

C-MOS 10-BIT 20 MSPS VIDEO A/D CONVERTER
—TOP VIEW—



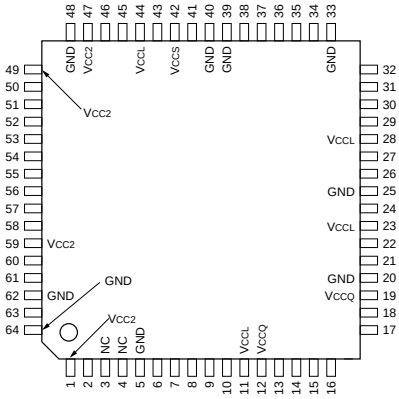
INPUT
CAL : CALIBRATION PULSE INPUT
CE : CHIP ENABLE
CLK : CLOCK
LINV : OUTPUT (D0 - D8) INVERSION
MINV : OUTPUT (D9) INVERSION
OE : DIGITAL DATA OUTPUT ENABLE
RESET : CALIBRATION CIRCUIT RESET
SEL : OUTPUT DATA (D5 - D9) SELECT FOR CALIBRATION (4-CLOCK)
HIGH ; THROUGH OUTPUT, OW ; DATA FIXED AS WITH D0 - D4
TIN : TEST SIGNAL INPUT
TMOD : TEST MODE
TS : TEST SIGNAL INPUT
TSTR : TEST SIGNAL INPUT
VRB : REFERENCE BOTTOM VOLTAGE
VRT : REFERENCE TOP VOLTAGE

OUTPUT
AT : TEST SIGNAL OUTPUT
D0 - D9 : DIGIRAL DATA OUTPUT
TO : TEST PIN

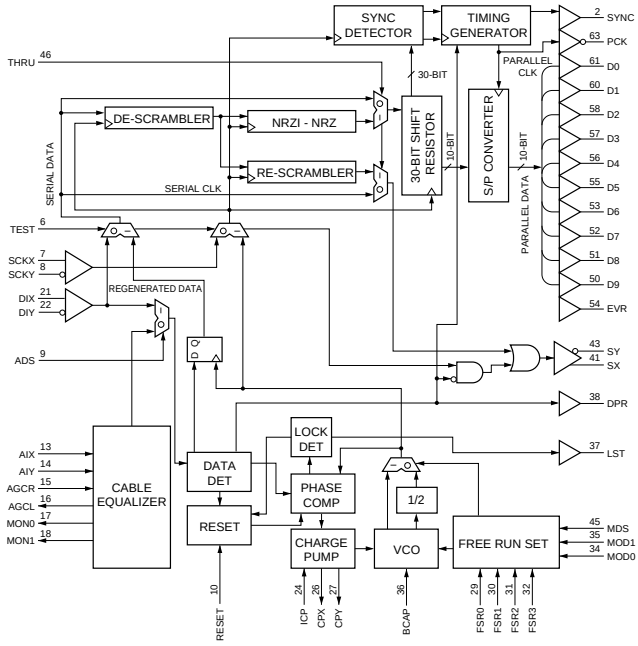
CXB1342R (SONY)

SERIAL DIGITAL INTERFACE TRANSMISSION DECODER

—TOP VIEW—



PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	—	VCC2	17	O	MON0	33	—	GND	49	—	VCC2
2	O	SYNC	18	O	MON1	34	I	MOD0	50	O	D9
3	—	NC	19	—	VCCQ	35	I	MOD1	51	O	D8
4	—	NC	20	—	GND	36	I	BCAP	52	O	D7
5	—	GND	21	I	DIX	37	O	LST	53	O	D6
6	I	TEST	22	I	DIY	38	O	DPR	54	O	EVR
7	I	SCKX	23	—	VCCL	39	—	GND	55	O	D5
8	I	SCKY	24	I	ICP	40	—	GND	56	O	D4
9	I	ADS	25	—	GND	41	O	SX	57	O	D3
10	I	RESET	26	O	CPX	42	—	VCCS	58	O	D2
11	—	VCCL	27	O	CPY	43	O	SY	59	—	VCC2
12	—	VCCQ	28	—	VCCL	44	—	VCCL	60	O	D1
13	I	AIX	29	I	FSR0	45	I	MDS	61	O	D0
14	I	AIY	30	I	FSR1	46	I	THRU	62	—	GND
15	I	AGCR	31	I	FSR2	47	—	VCC2	63	O	PCK
16	O	AGCL	32	I	FSR3	48	—	GND	64	—	GND



INPUT

ADS : TEST
AGCR : AGC REFERENCE VOLTAGE
AIX, AIY : SERIAL DATA
BCAP : EXTERNAL CAPACITOR FOR VCO
DIX, DIY : TEST
FSR0 - FSR3 : EXTERNAL RESISTOR FOR SETTING THE VCO FREE-RUN FREQUENCY
ICP : CHARGE PUMP CURRENT SETTING
MDS : TEST
MOD0, MOD1 : VCO RATE SELECT
RESET : PLL RESET
SCKX, SCKY : TEST
TEST : TEST
THRU : TEST

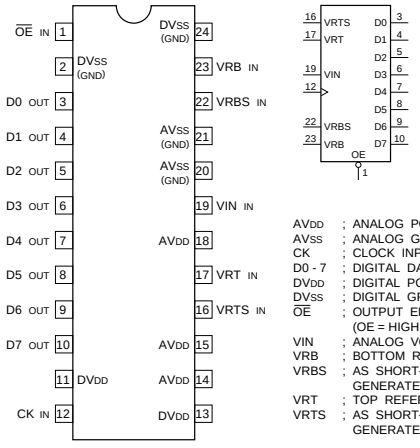
OUTPUT

AGCL : EXTERNAL CAPACITOR FOR PEAK DETECTION
CPX, CPY : CHARGE PUMP
D0 - D9 : PARALLEL CLOCK
DPR : PLL LOCK STATUS
EVR : PARALLEL CLOCK
LST : PLL LOCK STATUS
MON0, MON1 : EQUALIZER MONITOR
PCK : PARALLEL CLOCK
SX, SY : EXTERNAL RESISTOR FOR SERIAL DIFFERENTIAL OUTPUT
SYNC : PLL LOCK STATUS

CXD1175AM-TH (SONY)

C-MOS 8-BIT 20 MSPS VIDEO A / D CONVERTER

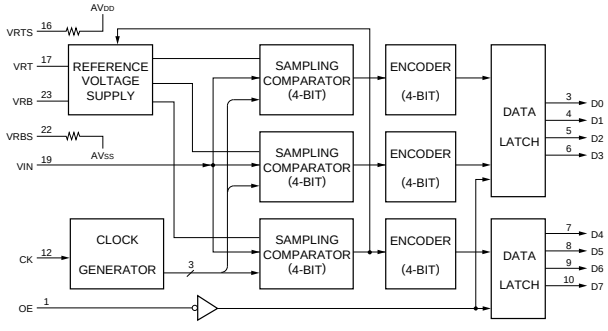
—TOP VIEW—



AVDD ; ANALOG POWER SUPPLY
AVSS ; ANALOG GROUND
CK ; CLOCK INPUT
D0 - 7 ; DIGITAL DATA OUTPUTS (LSB to MSB)
DVDD ; DIGITAL POWER SUPPLY
DVSS ; DIGITAL GROUND
$\overline{OE}$; OUTPUT ENABLE
(OE = HIGH ; HIGH IMPEDANCE)
VIN ; ANALOG VOLTAGE INPUT
VRB ; BOTTOM REFERENCE VOLTAGE INPUT
VRBS ; AS SHORT-CIRCUIT AT VRB.
GENERATES +0.6 V
VRT ; TOP REFERENCE VOLTAGE INPUT
VRTS ; AS SHORT-CIRCUIT AT VRT.
GENERATES +2.6 V

STEP	INPUT SIGNAL VOLTAGE	DATA OUTPUTS							
		D7	D6	D5	D4	D3	D2	D1	D0
0	0 V (VRT)	1	1	1	1	1	1	1	1
1	0.01 V	1	1	1	1	1	1	1	0
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
127	1.34 V	1	0	0	0	0	0	0	0
128	1.35 V	0	1	1	1	1	1	1	1
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
255	2.7 V (VRB)	0	0	0	0	0	0	0	0

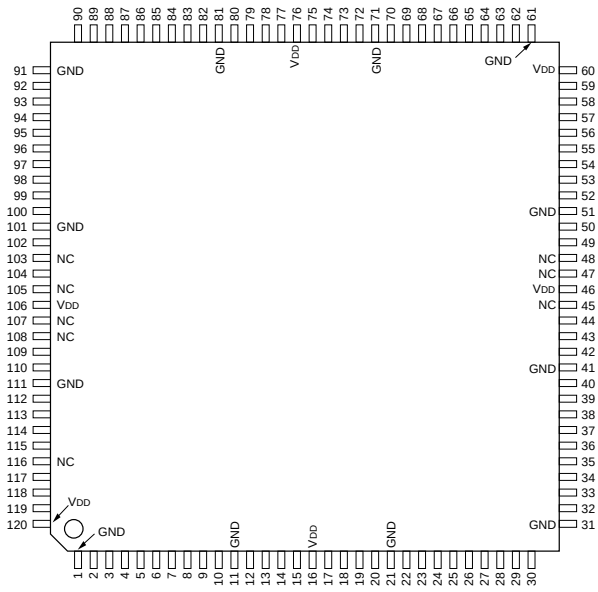
0 ; LOW LEVEL
1 ; HIGH LEVEL



CXD8280AQ (SONY)

C-MOS DIGITAL AUDIO TIME BASE EXPANSION FOR SIF RECEIVER

—TOP VIEW—

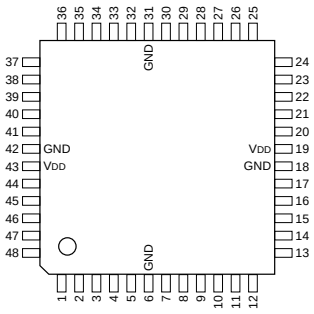


PIN NO.	I/O	SIGNAL	DESCRIPTION	PIN NO.	I/O	SIGNAL	DESCRIPTION
1	—	$\overline{GND}$		61	—	$\overline{GND}$	
2	I	$\overline{XMM}$	TEST	62	I	$\overline{OECRD}$	OUTPUT ENABLE FOR PIN 52 - 59
3	I	CLR	POWER ON CLEAR	63	I	CRA0	BUS READ ADDRESS 0
4	O	HIGH	TEST (ALWAYS H)	64	I	CRA1	BUS READ ADDRESS 1
5	O	RERR	TEST (R-ERROR)	65	I	CRA2	BUS READ ADDRESS 2
6	O	MON4	TEST (DELAY CH-4)	66	I	CRA3	BUS READ ADDRESS 3
7	O	MON3	TEST (DELAY CH-3)	67	I	CRA4	BUS READ ADDRESS 4
8	O	MON2	TEST (DELAY CH-2)	68	I	CRA5	BUS READ ADDRESS 5
9	O	MON1	TEST (DELAY CH-1)	69	I	DRA6	BUS READ ADDRESS 6
10	I	$\overline{OEMON}$	OUTPUT ENABLE FOR PIN 4 - 9	70	I	CREN	BUS ADDRESS LATCH ENABLE
11	—	$\overline{GND}$		71	—	$\overline{GND}$	
12	I	$\overline{ITA}$	TEST	72	O	$\overline{ERROR1}$	CH-1 ERROR FLAG
13	I	$\overline{ITB}$	TEST	73	O	$\overline{ERROR2}$	CH-2 ERROR FLAG
14	I	$\overline{ITC}$	TEST	74	O	$\overline{ERROR3}$	CH-3 ERROR FLAG
15	I	$\overline{ITD}$	TEST	75	O	$\overline{ERROR4}$	CH-4 ERROR FLAG
16	—	$\overline{VDD}$		76	—	$\overline{VDD}$	
17	I	$\overline{INTP4}$	CH-4 AUDIO INTERPOLATE	77	O	$\overline{EXIST1}$	CH-1 EXIST
18	I	$\overline{INTP3}$	CH-3 AUDIO INTERPOLATE	78	O	$\overline{EXIST2}$	CH-2 EXIST
19	I	$\overline{INTP2}$	CH-2 AUDIO INTERPOLATE	79	O	$\overline{EXIST3}$	CH-3 EXIST
20	I	INTP1	CH-1 AUDIO INTERPOLATE	80	O	$\overline{EXIST4}$	CH-4 EXIST
21	—	GND		81	—	$\overline{GND}$	
22	I	CHEX1	CHANNEL EXCHANGE 1	82	O	$\overline{DIDPER}$	DID PARITY ERROR
23	I	CHEX0	CHANNEL EXCHANGE 0	83	O	$\overline{DIDERR}$	DID UNMATCH ERROR
24	I	AFS	AUDIO FORMAT SELECT	84	O	$\overline{DBNPER}$	DBN PARITY ERROR
25	I	LRS	AUDIO LEFT/RIGHT BIT SELECT	85	O	$\overline{DBNERR}$	DBN UNCONTINUITY ERROR
26	I	DIR	AUDIO LSB/MSB FIRST SELECT	86	O	$\overline{DCPER}$	DC PARITY ERROR
27	I	20/16	AUDIO 20-BIT/16-BIT SELECT	87	O	$\overline{DCERR}$	DC UNMATCH ERROR
28	O	WERR	TEST (W-ERROR)	88	O	$\overline{UDPER}$	UD PARITY ERROR
29	O	Z3/4	CH-3/4 BLOCK SYNC (Z-FLAG)	89	O	$\overline{CSERR}$	CHECKSUM ERROR
30	O	Z1/2	CH-1/2 BLOCK SYNC (Z-FLAG)	90	I	$\overline{OEERR}$	OUTPUT ENABLE FOR PIN 82 - 89
31	—	GND		91	—	GND	
32	O	C3/4	CH-3/4 CHANNEL STATUS BIT	92	I	VIDEO0	VIDEO DATA 0
33	O	C1/2	CH-1/2 CHANNEL STATUS BIT	93	I	VIDEO1	VIDEO DATA 1
34	O	U3/4	CH-3/4 USER BIT	94	I	VIDEO2	VIDEO DATA 2
35	O	U1/2	CH-1/2 USER BIT	95	I	VIDEO3	VIDEO DATA 3
36	O	V3/4	CH-3/4 VALIDITY FLAG	96	I	VIDEO4	VIDEO DATA 4
37	O	V1/2	CH-1/2 VALIDITY FLAG	97	I	VIDEO5	VIDEO DATA 5
38	O	AD3/4	CH-3/4 AUDIO DATA	98	I	VIDEO6	VIDEO DATA 6
39	O	AD1/2	CH-1/2 AUDIO DATA	99	I	VIDEO7	VIDEO DATA 7
40	I	$\overline{OEAD}$	OUTPUT ENABLE FOR PIN 29 - 39	100	I	VIDEO8	VIDEO DATA 8
41	—	GND		101	—	GND	
42	I	BCK	AUDIO BIT CLOCK	102	I	VIDEO9	VIDEO DATA 9
43	I	LRCK	AUDIO L/R CLOCK	103	—	NC	
44	O	CMYW	TEST	104	I	525/$\overline{625}$	525/625 SELECT
45	—	NC		105	—	NC	
46	—	VDD		106	—	VDD	
47	—	NC		107	—	NC	
48	—	NC		108	—	NC	
49	I	$\overline{TEST}$	TEST	109	—	NC	
50	I	CRCK	BUS ADDRESS LATCH CLOCK	110	I	VCK	VIDEO CLOCK
51	—	GND		111	—	GND	
52	O	CRD7	BUS READ DATA 7	112	I	D2/$\overline{D1}$	D2/D1 SELECT
53	O	CRD6	BUS READ DATA 6	113	I	DID1	DID BIT1
54	O	CRD5	BUS READ DATA 5	114	I	$\overline{DID2}$	DID BIT2
55	O	CRD4	BUS READ DATA 4	115	I	ERDB	ERROR OVERRIDE FOR DEBUG
56	O	CRD3	BUS READ DATA 3	116	—	NC	
57	O	CRD2	BUS READ DATA 2	117	O	$\overline{EDHF}$	EDH FULL FIELD ERROR
58	O	CRD1	BUS READ DATA 1	118	O	$\overline{EDHA}$	EDH ACTIVE PICTURE ERROR
59	O	CRD0	BUS READ DATA 0	119	O	OVFS	TEST
60	—	VDD		120	—	VDD	

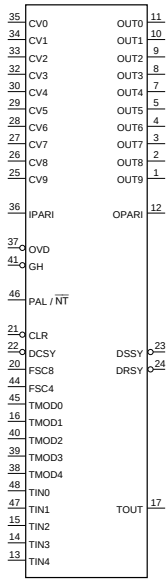
CXD304-106Q (SONY)

C-MOS 10-BIT PEDESTAL LEVEL REPLACEMENT OF COMPOSITE SIGNAL

—TOP VIEW—



PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	O	OUT9	13	I	TIN4	25	I	CV9	37	I	$\overline{OVD}$
2	O	OUT8	14	I	TIN3	26	I	CV8	38	I	TMOD4
3	O	OUT7	15	I	TIN2	27	I	CV7	39	I	TMOD3
4	O	OUT6	16	I	TMOD1	28	I	CV6	40	I	TMOD2
5	O	OUT5	17	O	TOUT	29	I	CV5	41	I	$\overline{GH}$
6	—	GND	18	—	GND	30	I	CV4	42	—	GND
7	O	OUT4	19	—	VDD	31	—	GND	43	—	VDD
8	O	OUT3	20	I	FSC8	32	I	CV3	44	I	FSC4
9	O	OUT2	21	I	$\overline{CLR}$	33	I	CV2	45	I	TMOD0
10	O	OUT1	22	I	$\overline{DCSY}$	34	I	CV1	46	I	PAL / $\overline{NT}$
11	O	OUT0	23	O	$\overline{DSSY}$	35	I	CV0	47	I	TIN1
12	O	OPARI	24	O	$\overline{DRSY}$	36	I	IPARI	48	I	TIN0



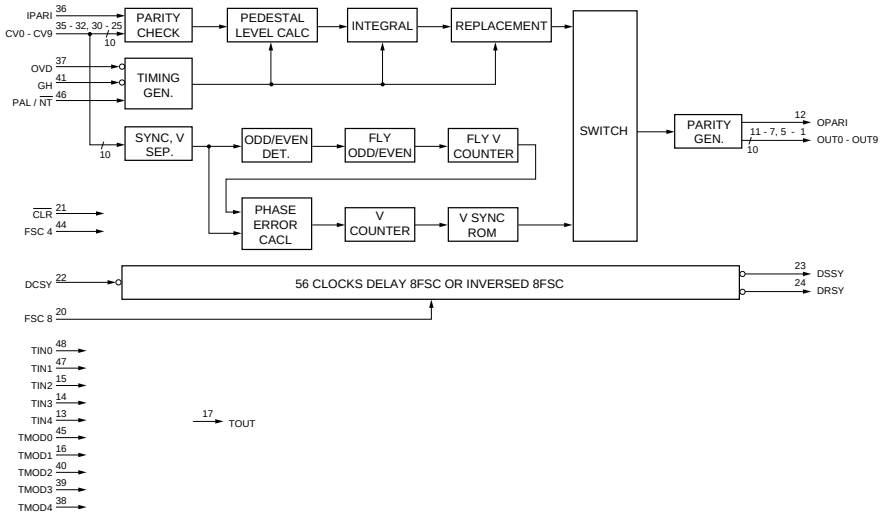
INPUT

$\overline{CLR}$	:	POWER ON RESET
CV0 - CV9	:	10-BIT COMPOSITE DATA
$\overline{DCSY}$	:	ANALOG SYNC
FSC4	:	4 fsc CLOCK
FSC8	:	8 fsc CLOCK
$\overline{GH}$	:	GH (GATED H) FROM CXD8819AQ
IPARI	:	PARITY OF INPUT DATA
$\overline{OVD}$	:	OUTPUT VD FROM CXD8819AQ
PAL / $\overline{NT}$	:	H : PAL, L : NTSC
TIN0 - TIN4	:	TEST PIN : OPEN
TMOD0 - TMOD4	:	TEST PIN : OPEN

OUTPUT

$\overline{DRSY}$	:	ANALOG DELAYED SYNC ($\overline{8\ fsc}$: 56-CLOCK)
$\overline{DSSY}$	:	ANALOG DELAYED SYNC (8 fsc : 56-CLOCK)
OPARI	:	PARITY OF OUTPUT DATA
OUT0 - OUT9	:	10-BIT COMPOSITE DATA
TOUT	:	TEST PIN

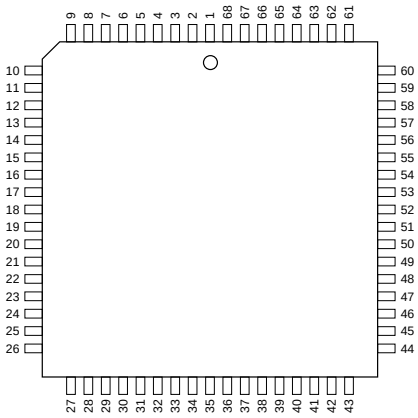
INPUT COMPOSITE VIDEO (From DIGITAL FILTER)

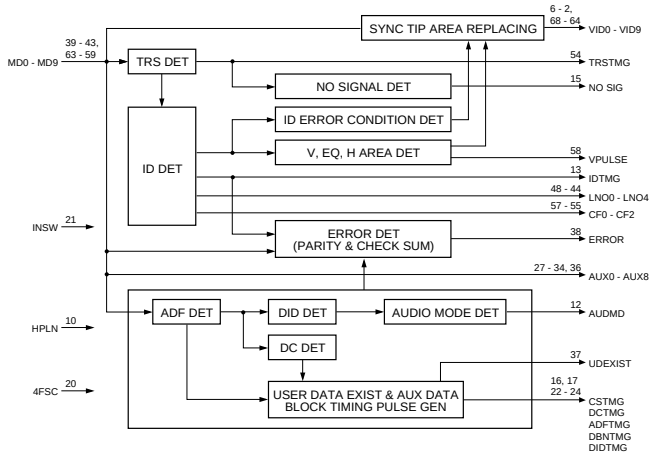


CXD8129K (SONY)

SERIAL INTERFACE RECEIVER FOR NTSC/PAL

—TOP VIEW—





PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	—	GND	18	—	Vcc	35	—	GND	52	—	Vcc
2	O	VID4	19	—	GND	36	O	AUX8	53	—	GND
3	O	VID3	20	I	4FSC	37	O	UDEXIST	54	O	TRSTMG
4	O	VID2	21	I	INSW	38	O	ERROR	55	O	CF2
5	O	VID1	22	O	ADFTMG	39	I	MD0	56	O	CF1
6	O	VID0	23	O	DBNTMG	40	I	MD1	57	O	CF0
7	I	∗RJNSEL1	24	O	DIDTMG	41	I	MD2	58	O	VPULSE
8	I	∗RJNSEL0	25	I	∗CY1H	42	I	MD3	59	I	MD9
9	I	∗OEPOLSEL	26	I	∗CY1L	43	I	MD4	60	I	MD8
10	I	HPLN	27	O	AUX0	44	O	LNO4	61	I	MD7
11	I	∗CYH1L2	28	O	AUX1	45	O	LNO3	62	I	MD6
12	O	AUDMD	29	O	AUX2	46	O	LNO2	63	I	MD5
13	O	IDTMG	30	O	AUX3	47	O	LNO1	64	O	VID9
14	O	∗TO	31	O	AUX4	48	O	LNO0	65	O	VID8
15	O	NOSIG	32	O	AUX5	49	I	∗TM1	66	O	VID7
16	O	CSTMG	33	O	AUX6	50	I	∗TM0	67	O	VID6
17	O	DCTMG	34	O	AUX7	51	I	∗RESET	68	O	VID5

∗ : USED FOR DEVICE TEST

INPUTS

4FSC	: SYSTEM CLOCK
CY1H, CY1L	: USED FOR DEVICE TEST
CYH1L2	: USED FOR DEVICE TEST
HPLN	: NTSC/PAL MODE SELECT (NTSC : LOW/PAL : HIGH)
INSW	: INERTIA SWITCH
MD0 - MD9	: MIXED DATA
OEPOLSEL	: USED FOR DEVICE TEST
RESET	: USED FOR DEVICE TEST
RJNSEL0, RJNSEL1	: USED FOR DEVICE TEST
TM0, TM1	: USED FOR DEVICE TEST

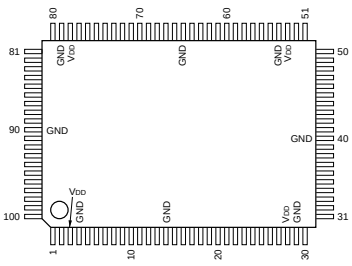
OUTPUTS

ADFTMG	: ADF TIMING
AUDMD	: AUDIO MODE (AES/EBU=HIGH)
AUX0 - AUX8	: AUX. DATA
CF0 - CF2	: COLOR FRAMING PULSE
CSTMG	: CS TIMING
DBNTMG	: DBN TIMING
DCTMG	: DC TIMING
DIDTMG	: DID TIMING
ERROR	: ERROR FLAG
IDTMG	: ID TIMING
LNO0 - LNO4	: LINE NO.
NOSIG	: NO SIGNAL
TO	: USED FOR DEVICE TEST
TRSTMG	: TRS TIMING
UDEXIST	: USER DATA EXIST
VID0 - VID9	: V PULSE (INDICATES THE FIELD START POINT)
VPULSE	: COMPOSITE DIGITAL VIDEO DATA

CXD8386AQ (SONY)

C-MOS 4:2:2 COMPONENT DECODER

—TOP VIEW—



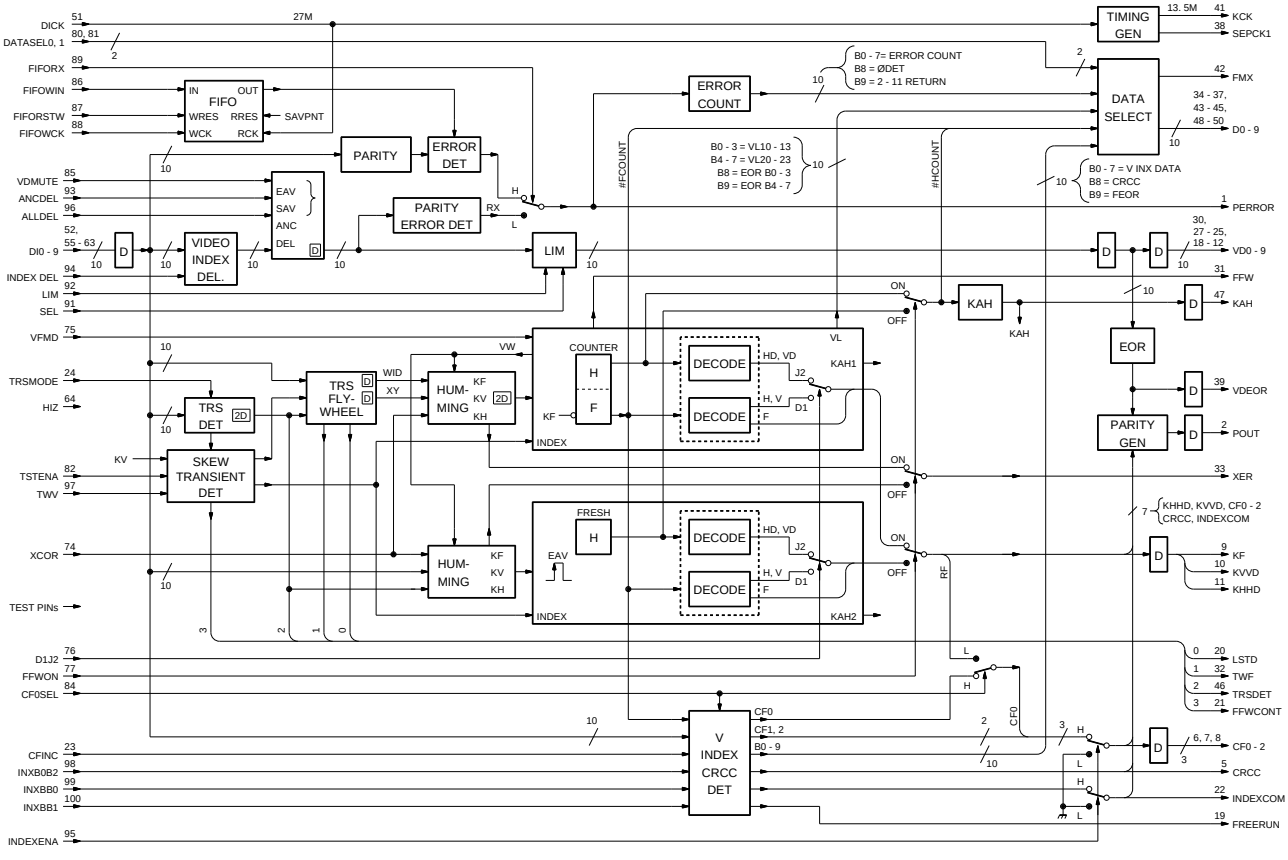
PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	O	PERROR	26	O	VD2	51	I	DICK	76	I	D1J2
2	O	POUT	27	O	VD1	52	I	DI0	77	I	FFWON
3	—	VDD	28	—	VDD	53	—	VDD	78	—	VDD
4	—	GND	29	—	GND	54	—	GND	79	—	GND
5	O	CRCC	30	O	VD0	55	I	DI1	80	I	DATASEL0
6	O	CF2	31	O	FFW	56	I	DI2	81	I	DATASEL1
7	O	CF1	32	O	TFW	57	I	DI3	82	I	TSTENA
8	O	CF0	33	O	XER	58	I	DI4	83	I	TEST
9	O	KF	34	O	D0	59	I	DI5	84	I	CF0SEL
10	O	KVVD	35	O	D1	60	I	DI6	85	I	VDMUTE
11	O	KHHD	36	O	D2	61	I	DI7	86	I	FIFOWIN
12	O	VD9	37	O	D3	62	I	DI8	87	I	FIFORSTW
13	O	VD8	38	O	SEPCK1	63	I	DI9	88	I	FIFOWCK
14	O	VD7	39	O	VDEOR	64	I	HIZ	89	I	FIFORX
15	—	GND	40	—	GND	65	—	GND	90	—	GND
16	O	VD6	41	O	KCK	66	I	TCLR	91	I	SEL
17	O	VD5	42	O	FMX	67	I	THCNT	92	I	LIM
18	O	VD4	43	O	D4	68	I	TFCNT	93	I	ANCDEL
19	O	FREERUN	44	O	D5	69	I	TCNT	94	I	INDEXDEL
20	O	LSTD	45	O	D6	70	I	TFCK	95	I	INDEXENA
21	O	FFWCONT	46	O	TRSDET	71	I	TCH01	96	I	ALLDEL
22	O	INDEXCOM	47	O	KAH	72	I	TCH02	97	I	TWV
23	I	CFINC	48	O	D7	73	I	THCOR	98	I	INXB0B2
24	I	TRSMODE	49	O	D8	74	I	XCOR	99	I	INXBB0
25	O	VD3	50	O	D9	75	I	VFMD	100	I	INXBB1

INPUT

ALLDEL	: DELETE CONTROL FOR BETWEEN EAV AND SAV
ANCDEL	: ANC DELETE CONTROL
CF0SEL	: CF0 SELECT
CFINC	: CF INCRIMENT CONTROL
D1J2	: MODE SELECT
DATASEL0, 1	: D0 - D9 DATA CONTROL
DI0 - 9	: VIDEO DATA BUS
DICK	: 27MHz CLOCK
FFWON	: SYNCHRONIZE SYSTEM FLYWHEEL/DIRECT SELECT
FIFORSTW, FIFORX, FIFOWCK, FIFOWIN	: SELF-DIAGNOSIS
HIZ	: OUTPUT SYSTEM HI-IMPEDANCE CONTROL
INDEXDEL	: INX DELETE CONTROL
INDEXENA	: INX ENABLE CONTROL
INXB0B2	: INX CONTROL
INXBB0, 1	: MOTOR CONTROL
LIM	: LIMITER ON/OFF CONTROL
SEL	: LIMITER MODE SELECT
TCH01 - 02, TCLR, TCNT, TFCK, TFCNT, THCNT, THCOR, TSTENA	: FOR TEST
TRSMODE	: TRS DETECT MODE SELECT
TWV	: NOT CONSECUTIVE DETECT CONTROL
VDMUTE	: MUTE CONTROL
VFMD	: 525,V HYSTERESIS PROCESS
XCOR	: TRS XY-BYTE PROCESS

OUTPUT

CF0 - 2	: COLOR FRAME
CRCC	: CLASS 2-1CRCC+CF0/RF0DET
D0 - 9	: INTERNAL DATA INFORMATION
FFW, TFW	: FLYWHEEL STATUS
FFWCONT	: FLY/DIRECT SYNCHRONIZE SELECT CONTROL
FMX	: F COUNTER PULSE STATE
FREERUN	: ERROR STATUS OF INX FOUR CONSECUTIVE TIMES
INDEXCOM	: COMPOSITE/COMPONENT SIGNAL
KAH	: ANALOG SYNCHRONIZE
KCK	: 13.5 MHz CLOCK
KF	: KF
KHHD	: H SYNCHRONIZE
KVVD	: V SYNCHRONIZE
LSTD	: 525/625 DETECT
PERROR	: SELF-DIAGNOSIS DETECT
POUT	: SELF-DIAGNOSIS PARITY BETWEEN BOARD
SEPCK1	: 6.75 MHz CLOCK
TRSDET	: TRS DETECT
VD0 - 9	: VIDEO DATA BUS
VDEOR	: VIDEO DATA EOR
XER	: TRS XY-BYTE HAMMING PROCESS

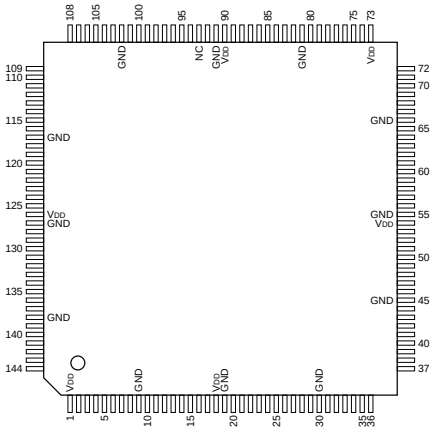


http://getMANUAL.com

CXD9000CR (SONY)

C-MOS HD-SDI COPROCESSOR

—TOP VIEW—

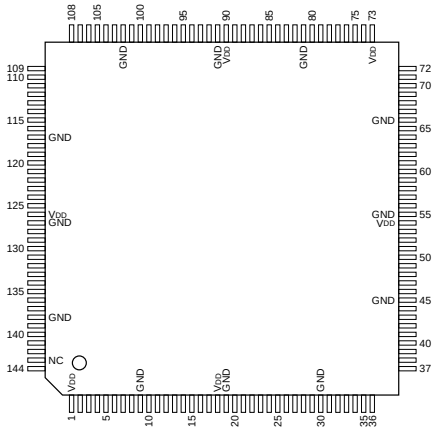


PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	—	VDD	37	—	NC	73	—	VDD	109	—	NC
2	I	IP AUDA12	38	O	OP AUEFLG	74	O	OP MYFLG1	110	I	IP YDATA0
3	I	IP AUDA34	39	O	OP YADFLG	75	O	OP MYFLG2	111	I	IP YDATA1
4	I	IP AUDA56	40	O	OP CADFLG	76	O	OP MYFLG3	112	I	IP YDATA2
5	I	IP AUDA78	41	—	NC	77	O	OP MYFLG4	113	I	IP YDATA3
6	I	IP CKAUA	42	O	OP CK74	78	O	OP MYFLG5	114	I	IP YDATA4
7	I	IP FSA	43	O	OP EXTV	79	I	IP RESET	115	I	IP YDATA5
8	I	IP CKAUB	44	O	OP EXTH	80	—	NC	116	I	IP YDATA6
9	—	GND	45	—	GND	81	—	GND	117	—	GND
10	I	IP FSB	46	O	OP EXTF	82	—	NC	118	I	IP YDATA7
11	—	NC	47	O	OP CDATA10	83	—	NC	119	I	IP YDATA8
12	—	NC	48	O	OP CDATA9	84	—	NC	120	I	IP YDATA9
13	—	NC	49	O	OP CDATA8	85	—	NC	121	I	IP YDATA10
14	—	NC	50	O	OP CDATA7	86	—	NC	122	I	IP CDATA0
15	—	NC	51	O	OP CDATA6	87	—	NC	123	I	IP CDATA1
16	—	NC	52	O	OP CDATA5	88	—	NC	124	I	IP CDATA2
17	—	NC	53	O	OP CDATA4	89	O	OP SYRW	125	I	IP CDATA3
18	—	VDD	54	—	VDD	90	—	VDD	126	—	VDD
19	—	GND	55	—	GND	91	—	GND	127	—	GND
20	O	OP AUCKPH1	56	O	OP CDATA3	92	I	IP SYRW	128	I	IP CDATA4
21	O	OP AUCKPH2	57	O	OP CDATA2	93	—	NC	129	I	IP CDATA5
22	O	OP AUEFLG12	58	O	OP CDATA1	94	I	IP XMM	130	I	IP CDATA6
23	O	OP AUEFLG34	59	O	OP CDATA0	95	I	IP SYCS	131	I	IP CDATA7
24	O	OP AUEFLG56	60	O	OP YDATA10	96	I	IP SYCK	132	I	IP CDATA8
25	O	OP AUEFLG78	61	O	OP YDATA9	97	I	IP SYSTA1	133	I	IP CDATA9
26	O	OP AUDA12	62	O	OP YDATA8	98	I	IP SYSTA0	134	I	IP CDATA10
27	O	OP AUDA34	63	O	OP YDATA7	99	I/O	BP SYIF7	135	I	IP EXTF
28	O	OP AUDA56	64	O	OP YDATA6	100	I/O	BP SYIF6	136	I	IP EXTH
29	O	OP AUDA78	65	O	OP YDATA5	101	I/O	BP SYIF5	137	—	NC
30	—	GND	66	—	GND	102	—	GND	138	—	GND
31	—	NC	67	O	OP YDATA4	103	I/O	BP SYIF4	139	I	IP CK74
32	—	NC	68	O	OP YDATA3	104	I/O	BP SYIF3	140	—	NC
33	—	NC	69	O	OP YDATA2	105	I/O	BP SYIF2	141	—	NC
34	—	NC	70	O	OP YDATA1	106	I/O	BP SYIF1	142	—	NC
35	—	NC	71	O	OP YDATA0	107	I/O	BP SYIF0	143	—	NC
36	—	NC	72	—	NC	108	—	NC	144	O	OP ERR

CXD9013AR (SONY)

C-MOS TIMING GENERATOR

—TOP VIEW—

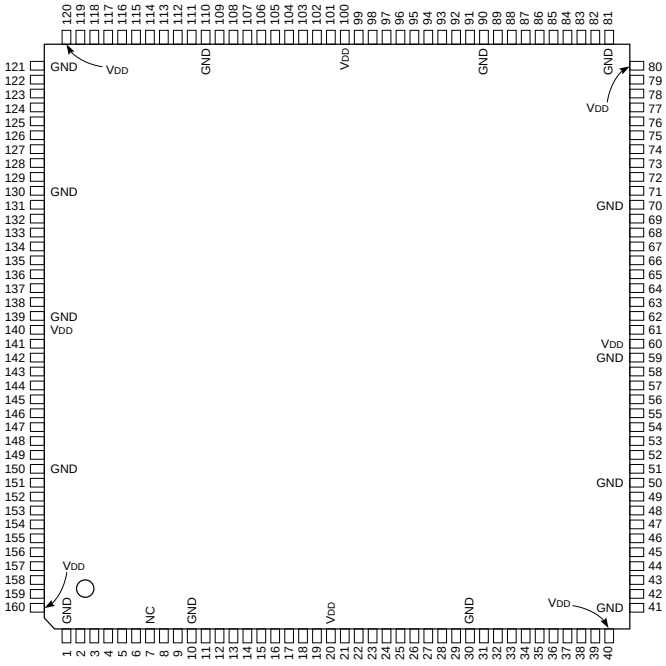


PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	—	VDD	37	O	OP FS512 479K	73	—	VDD	109	O	OP VARDADT 2
2	I	IP SYCS	38	O	OP AUDFRM	74	O	OP H1125 5	110	O	OP VARDADT 3
3	I	IP SYSTRB	39	O	OP CFINF	75	O	OP F1125 5	111	O	OP VARDADT 4
4	I	IP SYSTAT 0	40	O	OP CFRM0	76	O	OP H1125 6	112	O	OP VARDADT 5
5	I	IP SYSTAT 1	41	O	OP CFRM1	77	O	OP F1125 6	113	O	OP VARDADT 6
6	I/O	BP SYSIO 0	42	O	OP H525 0	78	O	OP CKO 46M	114	O	OP VARDADT 7
7	I/O	BP SYSIO 1	43	O	OP V525 0	79	I	IP TEST4	115	O	OP VARDADT 8
8	I/O	BP SYSIO 2	44	O	OP F525 0	80	O	OP LOCK 46	116	O	OP VARDADT 9
9	—	GND	45	—	GND	81	—	GND	117	—	GND
10	I/O	BP SYSIO 3	46	O	OP CKO 27M	82	O	OP CKO 56M	118	I	IP SDI F
11	I/O	BP SYSIO 4	47	O	OP CKO 13M	83	I	IP TEST5	119	I	IP SDI V
12	I/O	BP SYSIO 5	48	O	OVSS 3	84	O	OP LOCK 56	120	I	IP SDI H
13	I/O	BP SYSIO 6	49	O	OP VAR 27	85	I	IP TEST3	121	I	IP SDI FLG
14	I/O	BP SYSIO 7	50	O	OP REF 27	86	O	OP H1125 0	122	I	IP SDI CK
15	O	OVSS 1	51	I	XSM	87	O	OP F1125 0	123	O	OVSS 5
16	O	OP VAR 2458	52	I	XTST	88	O	OP H1125 1	124	I	IP CMP 1125
17	O	OP REF 2458	53	I	IP VCO 2700	89	O	OP F1125 1	125	I	IP CMP 525
18	—	VDD	54	—	VDD	90	—	VDD	126	—	VDD
19	—	GND	55	—	GND	91	—	GND	127	—	GND
20	I	IP VCO 2458	56	I	IP VCO 2703	92	O	OP H1125 2	128	O	SDO0
21	I	IP RST5FRM	57	O	OVDD 2	93	O	OP F1125 2	129	I	IP SUBCAR
22	O	OP LR 48K	58	O	OP SYNC1125 0	94	I	IP PLLTEST	130	I	IP SDIA F
23	O	OP FS64 48K	59	O	OP SYNC1125 1	95	O	OP CKO 74M	131	I	IP SDIA V
24	O	OP FS128 48K	60	O	OP SYNC1125 2	96	O	OP CKO 37M	132	I	IP SDIA H
25	O	OP FS256 48K	61	O	OP SYNC1125 3	97	O	OP CKO 18M	133	I	IP SDIA CK
26	O	OP FS512 48K	62	O	OP SYNC1125 4	98	O	OVSS 4	134	I	IP TEST0
27	O	OVSS 2	63	O	OP SYNC1125 5	99	I	IP VCO 7425	135	I	IP TEST1
28	O	OP VAR 2455	64	O	OP SYNC1125 6	100	O	OVDD 3	136	I	IP TEST2
29	O	OP REF 2455	65	O	OP SYNC1125 7	101	I	IP VCO 7418	137	I	VPDEA
30	—	GND	66	—	GND	102	—	GND	138	—	GND
31	I	IP VCO 2455	67	O	OP SYNC1125 8	103	O	OP VAR 74	139	O	OP LOCKAUD
32	O	OVDD1	68	O	OP SYNC1125 9	104	O	OP REF 74	140	I	IP TEST6
33	O	OP LR 479K	69	O	OP H1125 3	105	I	IP VARCMP 74	141	I	IP TEST7
34	O	OP FS64 479K	70	O	OP F1125 3	106	O	OP FRUN	142	O	OVDD 4
35	O	OP FS128 479K	71	O	OP H1125 4	107	O	OP VARDADT 0	143	—	NC
36	O	OP FS256 479K	72	O	OP F1125 4	108	O	OP VARDADT 1	144	I	IP RESET

CXD8819AQ (FUJITSU)

C-MOS DIGITAL VIDEO SIGNAL DECODER

—TOP VIEW—



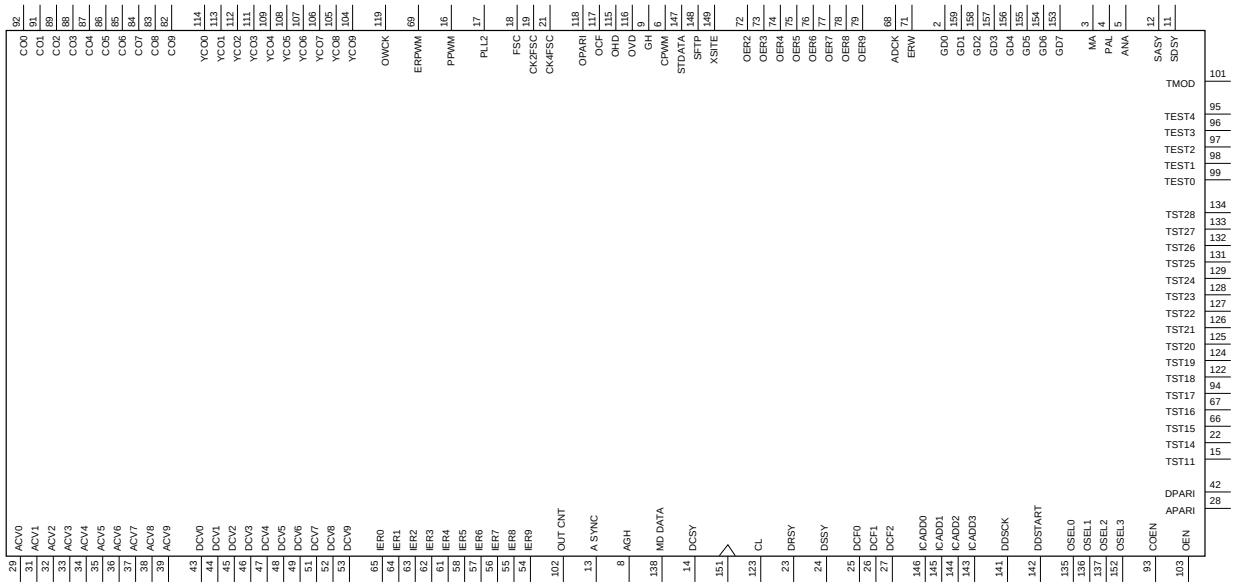
INPUT

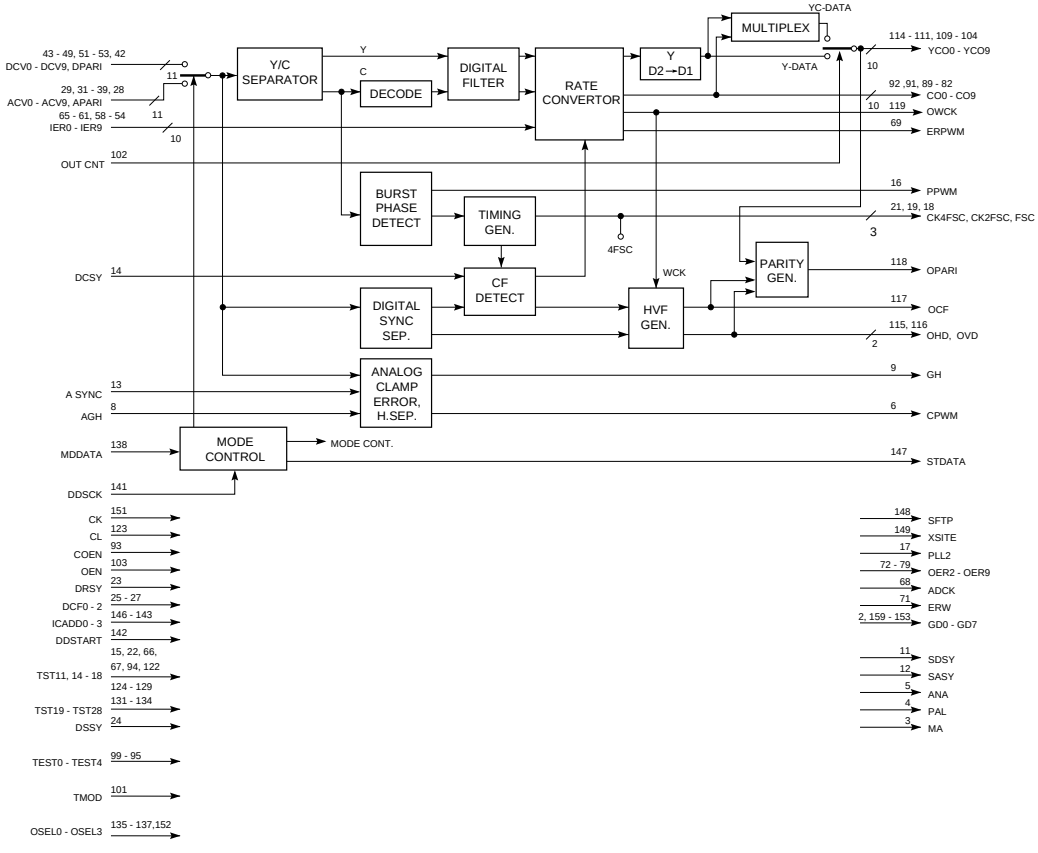
ACV0 - ACV9	: ANALOG INPUT DATA (0 - 9)
AGH	: ANALOG GATED H
APARI	: PARITY OF ANALOG INPUT DATA
ASYNC	: ANALOG COMPOSITE SYNC
CK	: INPUT 8 fsc CK
CL	: POWER ON RESET
COEN	: CHROMA OUTPUT ENABLE
DCF0 - DCF2	: D2 INPUT CF (0 - 2)
DCSY	: DELAYED COMPOSITE SYNC
DCV0 - DCV9	: DIGITAL INPUT DATA (0 - 9)
DDSCK	: CK FOR SERIAL MODE DATA
DDSTART	: START PULSE OF SERIAL COMMUNICATION
DPARI	: PARITY OF DIGITAL INPUT DATA
DRSY	: DIGITAL DELAYED SYNC ($\overline{8\ fsc} \times 8N$)
DSSY	: DIGITAL DELAYED SYNC (8 fsc × 8N)
ICADD0 - ICADD3	: IC ADDRESS (0 - 3)
IER0 - IER9	: NON STANDARD PLL ERROR INPUT (0 - 9)
MDDATA	: SERIAL MODE DATA FROM CPU
OEN	: Y (Y/C) OUTPUT ENABLE
OSEL0 - OSEL3	: TEST (0 - 3)
OUTCNT	: OUTPUT CONTROL : Y/YC MULTIPLEX
TEST0 - TEST4	: TEST (0 - 4)
TMOD	: TEST MODE
TST11	: TEST11
TST14 - TST28	: TEST (14 - 28)

OUTPUT

ADCK	: NON STANDARD PLL ERROR SAMPLING CK
ANA	: ANALOG/DIGITAL
CK2FSC	: INTERNAL 2 fsc CK
CK4FSC	: INTERNAL 4 fsc CK
CO0 - CO9	: CHROMA OUT (0 - 9)
CPWM	: CLAMP ERROR PWM
ERPWM	: NON STANDARD PLL ERROR SAMPLING PWM
ERW	: NON STANDARD PLL ERROR WIDTH
FSC	: INTERNAL fsc CK
GD0 - GD7	: GAIN DATA (0 - 7)
GH	: GATED H
MA	: MANUAL/AUTO (AGC MODE)
OCF	: CF INFORMATION
OER2 - OER9	: NON STANDARD PLL ERROR OUTPUT (2 - 9)
OHD	: HD
OPARI	: PARITY OF OUTPUT DATA
OVD	: VD
OWCK	: PSEUDO 13.5 MHz/27 MHz
PAL	: PAL/NTSC
PLL2	: DIGITAL PLL FOR 2 fsc CK
PPWM	: SAMPLING CK PLL ERROR PWM
SASY	: ANALOG SYNC
SDSY	: DIGITAL SYNC
SFTP	: DIRECTION FOR SCH 0˚
STDATA	: SERIAL OUTPUT DATA TO CPU
XSITE	: COMPONENT/COMPOSITE
YCO0 - YCO9	: Y (Y/C) OUTPUT (0 - 9)

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	—	GND	41	—	GND	81	—	GND	121	—	GND
2	O	GD0	42	I	DPARI	82	O	CO9	122	I	TST18
3	O	MA	43	I	DCV0	83	O	CO8	123	I	CL
4	O	PAL	44	I	DCV1	84	O	CO7	124	I	TST19
5	O	ANA	45	I	DCV2	85	O	CO6	125	I	TST20
6	O	CPWM	46	I	DCV3	86	O	CO5	126	I	TST21
7	—	NC	47	I	DCV4	87	O	CO4	127	I	TST22
8	I	AGH	48	I	DCV5	88	O	CO3	128	I	TST23
9	O	GH	49	I	DCV6	89	O	CO2	129	I	TST24
10	—	GND	50	—	GND	90	—	GND	130	—	GND
11	O	SDSY	51	I	DCV7	91	O	CO1	131	I	TST25
12	O	SASY	52	I	DCV8	92	O	CO0	132	I	TST26
13	I	ASYNC	53	I	DCV9	93	I	COEN	133	I	TST27
14	I	DCSY	54	I	IER9	94	I	TST17	134	I	TST28
15	I	TST11	55	I	IER8	95	I	TEST4	135	I	OSEL0
16	O	PPWM	56	I	IER7	96	I	TEST3	136	I	OSEL1
17	O	PLL2	57	I	IER6	97	I	TEST2	137	I	OSEL2
18	O	FSC	58	I	IER5	98	I	TEST1	138	I	MDDATA
19	O	CK2FSC	59	—	GND	99	I	TEST0	139	—	GND
20	—	VDD	60	—	VDD	100	—	VDD	140	—	VDD
21	O	CK4FSC	61	I	IER4	101	I	TMOD	141	I	DD SCK
22	I	TST14	62	I	IER3	102	I	OUTCNT	142	I	DDSTART
23	I	DRSY	63	I	IER2	103	I	OEN	143	I	ICADD3
24	I	DSSY	64	I	IER1	104	O	YCO9	144	I	ICADD2
25	I	DCF0	65	I	IER0	105	O	YCO8	145	I	ICADD1
26	I	DCF1	66	I	TST15	106	O	YCO7	146	I	ICADD0
27	I	DCF2	67	I	TST16	107	O	YCO6	147	O	STDATA
28	I	APARI	68	O	ADCK	108	O	YCO5	148	O	SFTP
29	I	ACV0	69	O	ERPWM	109	O	YCO4	149	O	XSITE
30	—	GND	70	—	GND	110	—	GND	150	—	GND
31	I	ACV1	71	O	ERW	111	O	YCO3	151	I	CK
32	I	ACV2	72	O	OER2	112	O	YCO2	152	I	OSEL3
33	I	ACV3	73	O	OER3	113	O	YCO1	153	O	GD7
34	I	ACV4	74	O	OER4	114	O	YCO0	154	O	GD6
35	I	ACV5	75	O	OER5	115	O	OHD	155	O	GD5
36	I	ACV6	76	O	OER6	116	O	OVD	156	O	GD4
37	I	ACV7	77	O	OER7	117	O	OCF	157	O	GD3
38	I	ACV8	78	O	OER8	118	O	OPARI	158	O	GD2
39	I	ACV9	79	O	OER9	119	O	OWCK	159	O	GD1
40	—	VDD	80	—	VDD	120	—	VDD	160	—	VDD

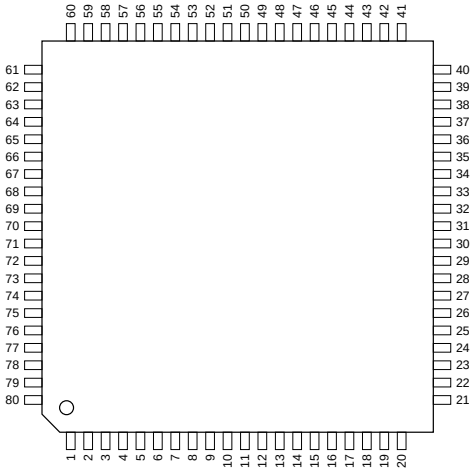

CO0 92
CO1 91
CO2 89
CO3 88
CO4 87
CO5 86
CO6 85
CO7 84
CO8 83
CO9 82
YCO0 114
YCO1 113
YCO2 112
YCO3 111
YCO4 109
YCO5 108
YCO6 107
YCO7 106
YCO8 105
YCO9 104
OWCK 119
ERPWM 69
PPWM 16
PLL2 17
FSC 18
CK2FSC 19
CK4FSC 21
OPARI 118
OCF 117
OHD 115
OVD 116
GH 9
CPWM 6
STDATA 147
SFTP 148
XSITE 149
OER2 72
OER3 73
OER4 74
OER5 75
OER6 76
OER7 77
OER8 78
OER9 79
ADCK 68
ERW 71
GD0 2
GD1 159
GD2 158
GD3 157
GD4 156
GD5 155
GD6 154
GD7 153
MA 3
PAL 4
ANA 5
SASY 12
SDSY 11
TMOD 101
TEST4 95
TEST3 96
TEST2 97
TEST1 98
TEST0 99
TST28 134
TST27 133
TST26 132
TST25 131
TST24 129
TST23 128
TST22 127
TST21 126
TST20 125
TST19 124
TST18 122
TST17 94
TST16 67
TST15 66
TST14 22
TST11 15
DPARI 42
APARI 28
ACV0 29
ACV1 31
ACV2 32
ACV3 33
ACV4 34
ACV5 35
ACV6 36
ACV7 37
ACV8 38
ACV9 39
DCV0 43
DCV1 44
DCV2 45
DCV3 46
DCV4 47
DCV5 48
DCV6 49
DCV7 51
DCV8 52
DCV9 53
IER0 65
IER1 64
IER2 63
IER3 62
IER4 61
IER5 58
IER6 57
IER7 56
IER8 55
IER9 54
OUT CNT 102
A SYNC 13
AGH 8
MD DATA 138
DCSY 14
CL 123
DRSY 23
DSSY 24
DCF0 25
DCF1 26
DCF2 27
ICADD0 146
ICADD1 145
ICADD2 144
ICADD3 143
DDSCK 141
DDSTART 142
OSEL0 135
OSEL1 136
OSEL2 137
OSEL3 152
COEN 93
OEN 103


43 - 49, 51 - 53, 42
DCV0 - DCV9, DPARI
29, 31 - 39, 28
ACV0 - ACV9, APARI
65 - 61, 58 - 54
IER0 - IER9
OUT CNT
DCSY
A SYNC
AGH
MDDATA
DDSCK
CK
CL
COEN
OEN
DRSY
DCF0 - 2
ICADD0 - 3
DDSTART
TST11, 14 - 18
TST19 - TST28
DSSY
TEST0 - TEST4
TMOD
OSEL0 - OSEL3
Y/C SEPARATOR
Y
C
DECODE
DIGITAL FILTER
RATE CONVERTOR
Y D2→D1
MULTIPLEX
YC-DATA
Y-DATA
BURST PHASE DETECT
TIMING GEN.
4FSC
CF DETECT
WCK
DIGITAL SYNC SEP.
HVF GEN.
PARITY GEN.
ANALOG CLAMP ERROR, H.SEP.
MODE CONTROL
MODE CONT.
114 - 111, 109 - 104
YCO0 - YCO9
92 ,91, 89 - 82
CO0 - CO9
OWCK
ERPWM
PPWM
21, 19, 18
CK4FSC, CK2FSC, FSC
OPARI
OCF
115, 116
OHD, OVD
GH
CPWM
STDATA
SFTP
XSITE
PLL2
72 - 79
OER2 - OER9
ADCK
ERW
2, 159 - 153
GD0 - GD7
SDSY
SASY
ANA
PAL
MA

HD64F2132FA20 (HITACHI)

16-BIT MICROCOMPUTER

—TOP VIEW—



PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I	$\overline{RES}$	28	I/O	P67/CIN7/$\overline{KIN7}$/$\overline{IRQ7}$	55	I/O	P20/A8
2	I	XTAL	29	—	AVcc	56	—	GND
3	I	EXTAL	30	I	P70/AN0	57	I/O	P17/A7
4	I	MD1	31	I	P71/AN1	58	I/O	P16/A6
5	I	MD0	32	I	P72/AN2	59	I/O	P15/A5
6	I	NMI	33	I	P73/AN3	60	I/O	P14/A4
7	I	$\overline{STBY}$	34	I	P74/AN4	61	I/O	P13/A3
8	—	Vcc	35	I	P75/AN5	62	I/O	P12/A2
9	I/O	P52/SCK0	36	I/O	P76/AN6/DA0	63	I/O	P11/A1
10	I/O	P51/RxD0	37	I/O	P77/AN7/DA1	64	I/O	P10/A0
11	I/O	P50/TxD0	38	—	A.GND	65	I/O	P30/D8
12	—	GND	39	I/O	P40/TMCI0/TxD2/IrTxD	66	I/O	P31/D9
13	I/O	P97/$\overline{WAIT}$	40	I/O	P41/TMO0/RxD2/IrRxD	67	I/O	P32/D10
14	I/O	P96/ø/EXCL	41	I/O	P42/TMRI0/SCK2	68	I/O	P33/D11
15	I/O	P95/$\overline{AS}$/$\overline{IOS}$	42	I/O	P43/TMCI1	69	I/O	P34/D12
16	I/O	P94/$\overline{HWR}$	43	I/O	P44/TMO1	70	I/O	P35/D13
17	I/O	P93/$\overline{RD}$	44	I/O	P45/TMRI1	71	I/O	P36/D14
18	I/O	P92/$\overline{IRQ0}$	45	I/O	P46/PWX0	72	I/O	P37/D15
19	I/O	P91/$\overline{IRQ1}$	46	I/O	P47/PWX1	73	—	GND
20	I/O	P90/$\overline{IRQ2}$/$\overline{ADTRG}$	47	—	Vcc	74	I/O	P80
21	I/O	P60/FTCI/CIN0/$\overline{KIN0}$	48	I/O	P27/A15	75	I/O	P81
22	I/O	P61/FTOA/CIN1/$\overline{KIN1}$	49	I/O	P26/A14	76	I/O	P82
23	I/O	P62/FTIA/CIN2/$\overline{KIN2}$/TMIY	50	I/O	P25/A13	77	I/O	P83
24	I/O	P63/FTIB/CIN3/$\overline{KIN3}$	51	I/O	P24/A12	78	I/O	P84/$\overline{IRQ3}$/TxD1
25	I/O	P64/FTIC/CIN4/$\overline{KIN4}$	52	I/O	P23/A11	79	I/O	P85/$\overline{IRQ4}$/RxD1
26	I/O	P65/FTID/CIN5/$\overline{KIN5}$	53	I/O	P22/A10	80	I/O	P86/$\overline{IRQ5}$/SCK1
27	I/O	P66/FTOB/CIN6/$\overline{KIN6}$/$\overline{IRQ6}$	54	I/O	P21/A9			

INPUTS

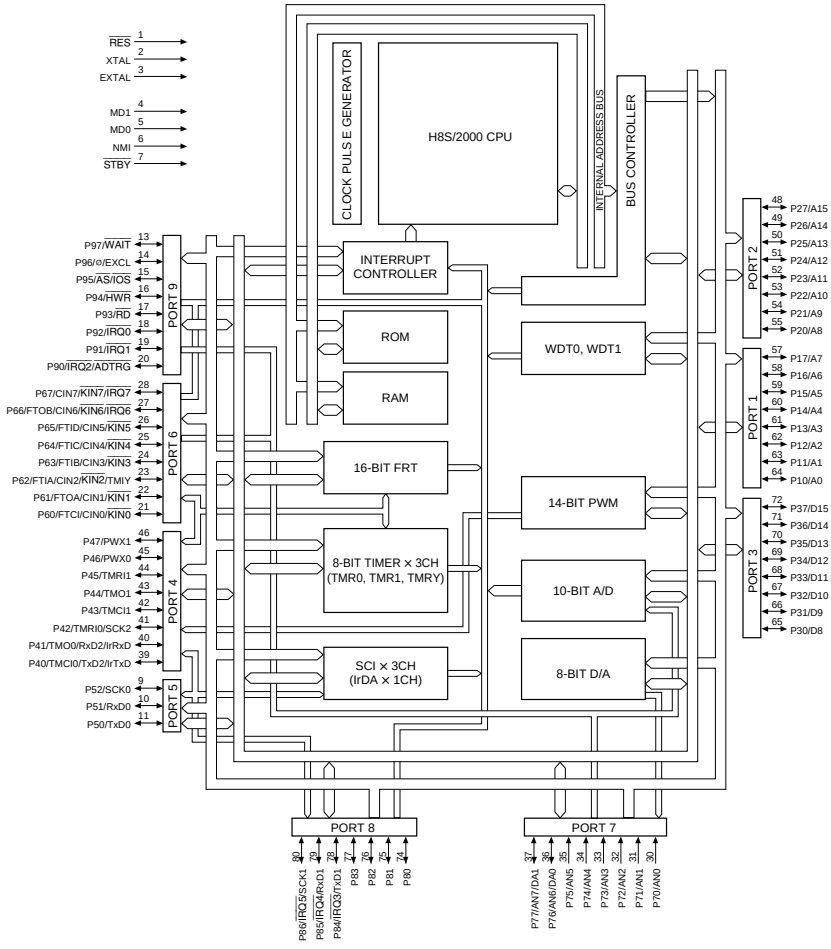
$\overline{ADTRG}$	: A/D CONVERSION EXTERNAL TRIGGER
AN0 - AN7	: ANALOG
CIN0 - CIN7	: COMPARATOR
EXCL	: EXTERNAL SUBCLOCK
EXTAL	: EXTERNAL CLOCK
FTCI	: FRT COUNTER CLOCK
FTIA - FTID	: FRT INPUT CAPTURE A - D
$\overline{IOR}$	: I/O READ
$\overline{IOW}$	: I/O WRITE
$\overline{IRQ0}$ - $\overline{IRQ7}$	: INTERRUPT REQUEST
IrRxD	: IrDA RECEIVE
$\overline{KIN0}$ - $\overline{KIN7}$	: KEYBOARD
MD0, MD1	: MODE
NMI	: NONMASKABLE INTERRUPT
P70 - P77	: PORT 7
$\overline{RES}$	: RESET
RxD0 - RxD2	: RECEIVE DATA
$\overline{STBY}$	: STANDBY
TMCI0, TMCI1	: COUNTER EXTERNAL CLOCK
TMIY	: COUNTER EXTERNAL CLOCK AND RESET
TMRI0, TMRI1	: COUNTER EXTERNAL RESET
$\overline{WAIT}$	: WAIT
XTAL	: CRYSTAL OSCILLATOR

OUTPUTS

A0 - A15	: ADDRESS BUS
$\overline{AS}$	: ADDRESS STROBE
DA0, DA1	: ANALOG
FTOA, FTOB	: FRT OUTPUT COMPARE A, B
$\overline{HWR}$	: HIGH WRITE
$\overline{IOS}$	: I/O STROBE
IrTxD	: IrDA TRANSMIT DATA
PW0 - PW15	: PWM TIMER
PWX0, PWX1	: PWM TIMER
$\overline{RD}$	: READ
TMO0, TMO1	: COMPARE MATCH
TxD0 - TxD2	: TRANSMIT DATA
ø	: SYSTEM CLOCK

INPUTS/OUTPUTS

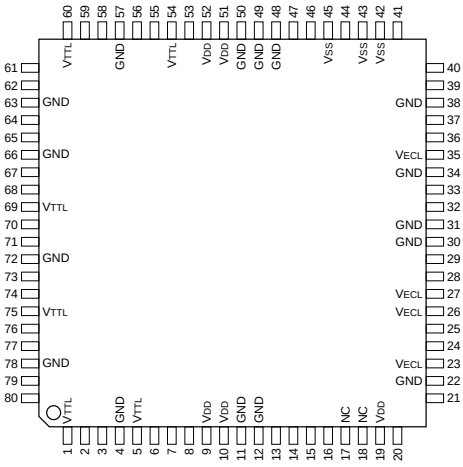
D8 - D15	: DATA BUS
P10 - P17	: PORT 1
P20 - P27	: PORT 2
P30 - P37	: PORT 3
P40 - P47	: PORT 4
P50 - P52	: PORT 5
P60 - P67	: PORT 6
P80 - P86	: PORT 8
P90 - P97	: PORT 9
SCK0 - SCK2	: SERIAL CLOCK

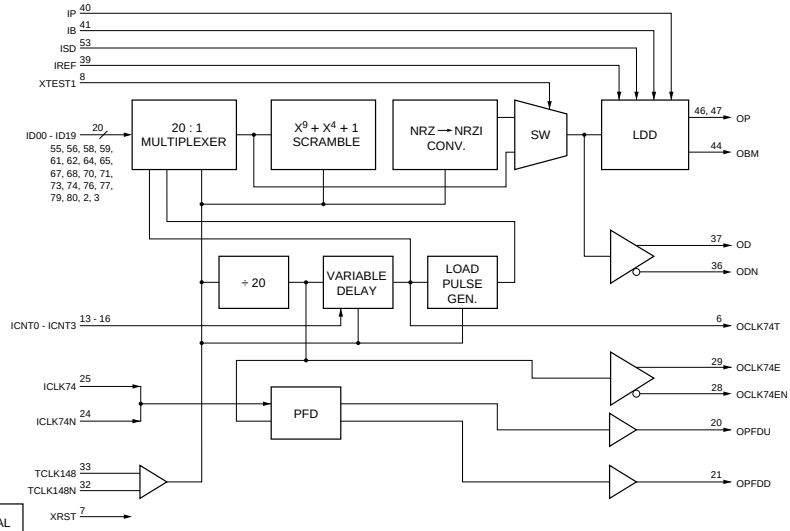


CXG8003Q (SONY)

1.5 Gbps TRANSMITTER

—TOP VIEW—





PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	—	VTTL	21	O	OPFDD	41	I	IB	61	I	ID04
2	I	ID18	22	—	GND	42	—	VSS	62	I	ID05
3	I	ID19	23	—	VECL	43	—	VSS	63	—	GND
4	—	GND	24	I	ICLK74N	44	O	OBM	64	I	ID06
5	—	VTTL	25	I	ICLK74	45	—	VSS	65	I	ID07
6	O	OCLK74T	26	—	VECL	46	O	OP	66	—	GND
7	I	XRST	27	—	VECL	47	O	OP	67	I	ID08
8	I	XTEST1	28	O	OCLK74EN	48	—	GND	68	I	ID09
9	—	VDD	29	O	OCLK74E	49	—	GND	69	—	VTTL
10	—	VDD	30	—	GND	50	—	GND	70	I	ID10
11	—	GND	31	—	GND	51	—	VDD	71	I	ID11
12	—	GND	32	I	TCLK148N	52	—	VDD	72	—	GND
13	I	ICNT0	33	I	TCLK148	53	I	ISD	73	I	ID12
14	I	ICNT1	34	—	GND	54	—	VTTL	74	I	ID13
15	I	ICNT2	35	—	VECL	55	I	ID00	75	—	VTTL
16	I	ICNT3	36	O	ODN	56	I	ID01	76	I	ID14
17	—	NC	37	O	OD	57	—	GND	77	I	ID15
18	—	NC	38	—	GND	58	I	ID02	78	—	GND
19	—	VDD	39	I	IREF	59	I	ID03	79	I	ID16
20	O	OPFDU	40	I	IP	60	—	VTTL	80	I	ID17

INPUTS

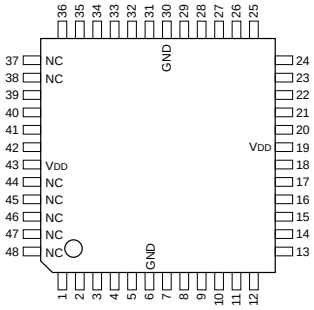
IB : LD DRIVER BIAS CURRENT CONTROL
ICLK74 : PLL REFERENCE CLOCK (74.25 MHz)
ICLK74N : INVERTED PLL REFERENCE CLOCK (74.25 MHz)
ICNT0 - ICNT3 : PARALLEL CLOCK DELAY CONTROL
ID00 - ID19 : 20 BITS PARALLEL SIGNAL
IP : LD DRIVER PEAK CURRENT CONTROL
IREF : LD DRIVER DUTY CONTROL
ISD : LD DRIVER OUTPUT CONTROL
TCLK148 : EXTERNAL CLOCK (1.485 GHz)
TCLK148N : INVERTED EXTERNAL CLOCK (1.485 GHz)
XRST : RESET
XTEST1 : SCRAMBLE/NRZ TO NRZI CONVERSION CONTROL

OUTPUTS

OBM : LD DRIVER BIAS CURRENT MONITOR
OCLK74E : 74.25 MHz PARALLEL CLOCK (ECL LEVEL)
OCLK74EN : INVERTED 74.25 MHz PARALLEL CLOCK (ECL LEVEL)
OCLK74T : 74.25 MHz PARALLEL CLOCK (LVTTL LEVEL)
OD : 1.485 Gbps SERIAL DATA
ODN : INVERTED 1.485 Gbps SERIAL DATA
OP : LD DRIVER PEAK CURRENT
OPFDD : LOWER SIDE OF THE PHASE COMPARATOR (PFD)
OPFDU : UPPER SIDE OF THE PHASE COMPARATOR (PFD)

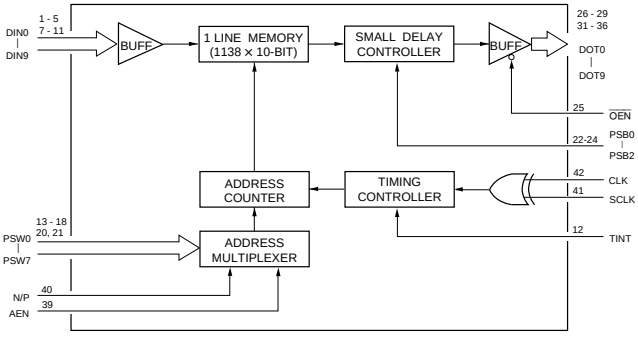
CXK1203AR (SONY)
CXK1203AR-T4

C-MOS DIGITAL LINE MEMORY
—TOP VIEW—



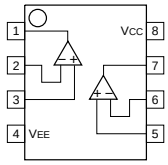
PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I	D0	13	I	PSW7	25	I	$\overline{OEN}$	37	—	NC
2	I	D1	14	I	PSW6	26	O	DOT9	38	—	NC
3	I	D2	15	I	PSW5	27	O	DOT8	39	I	AEN
4	I	D3	16	I	PSW4	28	O	DOT7	40	I	N/P
5	I	D4	17	I	PSW3	29	O	DOT6	41	I	SCLK
6	—	GND	18	I	PSW2	30	—	GND	42	I	CLK
7	I	D5	19	—	VDD	31	O	DOT5	43	—	VDD
8	I	D6	20	I	PSW1	32	O	DOT4	44	—	NC
9	I	D7	21	I	PSW0	33	O	DOT3	45	—	NC
10	I	D8	22	I	PSB2	34	O	DOT2	46	—	NC
11	I	D9	23	I	PSB1	35	O	DOT1	47	—	NC
12	I	TINT	24	I	PSB0	36	O	DOT0	48	—	NC

AEN : LINE MEMORY SELECT
CLK : CLOCK
DIN0 - DIN9 : VIDEO DATA INPUT
DOT0 - DOT9 : VIDEO DATA OUTPUT
N/P : NTSC/PAL/SECAM SELECT
OEN : OUTPUT ENABLE
PSB0 - PSB2 : DELAY STEP SELECT (1-BITxN)
PSW0 - PSW7 : DELAY STEP SELECT (8-BITxN)
SCLK : CLOCK EDGE SELECT
TINT : TEST



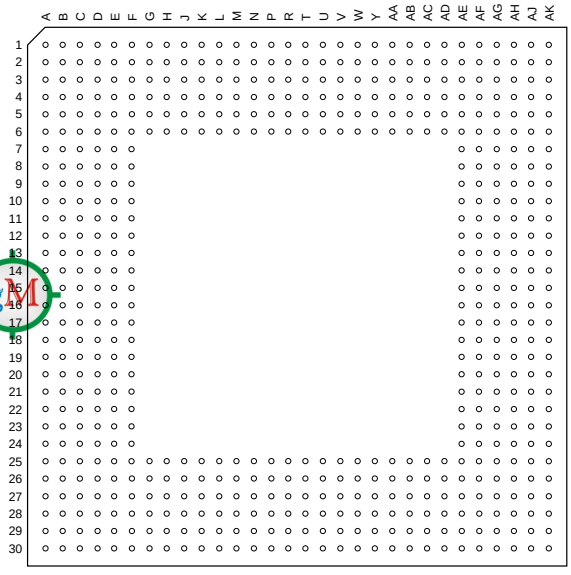
EL2244CS (ELANTEC)
EL2244CS-TE2
LM358M (MOTOROLA)
LM358M-FL63

DUAL OPERATIONAL AMPLIFIERS
(SINGLE-SUPPLY TYPE)
—TOP VIEW—



CXD9079GB (SONY)

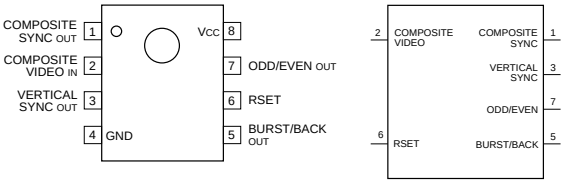
VIDEO SIGNAL PROCESSOR
—BOTTOM VIEW—

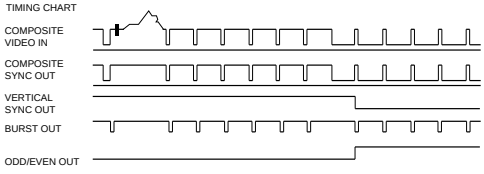


PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
A1	—	GND	T30	I/O	MDQ106	AJ3	I/O	MDQ2	B10	I	HDC1	P28	I/O	MDQ118	AG17	I/O	MDQ50	AA5	I	TEST C4	K6	—	Vcc
B1	—	GND	R30	I/O	MDQ111	AJ4	I/O	MDQ4	B9	I	HDH	N28	I/O	MDQ120	AG18	—	GND	AB5	I	TESTY9	L6	—	GND
C1	O	TSDO0	P30	I/O	MDQ116	AJ5	—	Vcc	B8	—	Vcc	M28	I/O	MDQ124	AG19	I/O	MDQ56	AC5	—	Vcc	M6	—	GND
D1	O	XT	N30	—	GND	AJ6	I/O	MDQ9	B7	I/O	SYIO7	L28	I/O	MDQ127	AG20	I/O	MDQ61	AD5	I	MINIT	N6	—	Vcc
E1	O	CPO	M30	I/O	MDQ122	AJ7	—	GND	B6	I/O	SYIO3	K28	—	Vcc	AG21	I/O	MDQ63	AE5	O	MCMON3	P6	—	Vcc
F1	I	PLLMD0	L30	—	GND	AJ8	I/O	MDQ16	B5	—	Vcc	J28	—	GND	AG22	O	MA3	AF5	O	MCMON2	R6	—	GND
G1	—	GND	K30	O	SD05	AJ9	I/O	MDQ20	B4	I	CKSY	H28	O	SD00	AG23	O	MA7	AF6	I/O	MDQ11	T6	—	GND
H1	I	CLK CK27	J30	O	SD01	AJ10	I/O	MDQ22	B3	I	SYSTA0	G28	O	SD15	AG24	O	MA9	AF7	I/O	MDQ15	U6	—	Vcc
J1	I	VPD	H30	O	SD18	AJ11	I/O	MDQ26	C3	I	SYSTA1	F28	O	SD11	AG25	—	GND	AF8	—	Vcc	V6	—	Vcc
K1	—	Vcc	G30	O	SD14	AJ12	I/O	MDQ30	D3	—	Vcc	E28	—	GND	AG26	O	MWE	AF9	—	GND	W6	—	GND
L1	I	HDRDF1	F30	O	SDEN	AJ13	I/O	MDQ34	E3	I	TSDI0	D28	O	HDY7	AG27	I/O	MDQ71	AF10	I/O	MDQ24	Y6	—	GND
M1	I	HDRDF0	E30	O	SDF	AJ14	—	Vcc	F3	I	VCI	C28	O	HDY6	AF27	I/O	MDQ75	AF11	—	Vcc	AA6	—	Vcc
N1	—	GND	D30	O	SDO3	AJ15	I/O	MDQ40	G3	I	PLLMD2	C27	O	HDY2	AE27	I/O	MDQ78	AF12	I/O	MDQ33	AB6	—	Vcc
P1	O	MON C8	C30	O	SDO6	AJ16	I/O	MDQ45	H3	I	CLK CK74	C26	O	HDC8	AD27	I/O	MDQ82	AF13	I/O	MDQ36	AC6	I	MBSEL
R1	O	MON C3	B30	—	GND	AJ17	—	Vcc	J3	—	Vcc	C25	O	HDC5	AC27	I/O	MDQ85	AF14	—	Vcc	AD6	—	GND
T1	O	MON Y8	A30	—	GND	AJ18	I/O	MDQ51	K3	I	XSM	C24	O	HDC1	AB27	I/O	MDQ88	AF15	I/O	MDQ43	AE6	—	GND
U1	O	MON Y4	A29	—	GND	AJ19	I/O	MDQ54	L3	I	SDXF	C23	—	GND	AA27	I/O	MDQ92	AF16	I/O	MDQ47	AE7	—	GND
V1	O	MON Y0	A28	O	HDY4	AJ20	I/O	MDQ59	M3	I	SDXH	C22	O	SDO10	Y27	—	Vcc	AF17	—	Vcc	AE8	I/O	MDQ18
W1	—	Vcc	A27	O	HDY0	AJ21	O	MA0	N3	—	Vcc	C21	I	SD07	W27	I/O	MDQ99	AF18	I/O	MDQ52	AE9	—	Vcc
Y1	I	TEST C5	A26	O	HDC6	AJ22	—	Vcc	P3	O	MON C9	C20	I	SD03	V27	I/O	MDQ102	AF19	I/O	MDQ57	AE10	—	Vcc
AA1	I	TEST C0	A25	O	HDC3	AJ23	O	MA6	R3	O	MON C5	C19	I	SD0EN	U27	—	GND	AF20	—	Vcc	AE11	—	GND
AB1	I	TEST Y5	A24	O	HDC0	AJ24	O	MA8	T3	O	MON C0	C18	I	SD17	T27	I/O	MDQ109	AF21	—	Vcc	AE12	—	GND
AC1	I	TEST Y1	A23	O	HDF	AJ25	O	MCKE	U3	O	MON Y6	C17	I	SD13	R27	I/O	MDQ114	AF22	O	MA4	AE13	—	Vcc
AD1	I	TEST Y0	A22	—	Vcc	AJ26	O	MRAS	V3	O	MON Y1	C16	I	SD1EN	P27	—	Vcc	AF23	—	Vcc	AE14	—	Vcc
AE1	I	CLK FS64	A21	I	SD05	AJ27	I/O	MDQ66	W3	I	TEST C9	C15	O	SD1MON0	N27	I/O	MDQ121	AF24	O	MA10	AE15	—	GND
AF1	O	MCMON0	A20	I	SD01	AJ28	—	GND	Y3	I	TEST C7	C14	O	HDMON0	M27	I/O	MDQ125	AF25	O	MA12	AE16	—	GND
AG1	O	AUOUT2	A19	I	SD0F	AJ29	I/O	MDQ65	AA3	I	TEST C2	C13	I	HDY5	L27	O	SD09	AF26	I/O	MDQ76	AE17	—	Vcc
AH1	O	AUOUT0	A18	I	SD15	AH29	—	GND	AB3	I	TEST Y7	C12	I	HDY0	K27	O	SD07	AE26	I/O	MDQ79	AE18	—	Vcc
AJ1	—	GND	A17	I	SD11	AG29	I/O	MDQ69	AC3	I	TEST Y3	C11	I	HDC6	J27	O	SD03	AD26	—	Vcc	AE19	—	GND
AK1	—	GND	A16	I	SD1F	AF29	I/O	MDQ73	AD3	I	AUIN2	C10	I	HDC2	H27	—	Vcc	AC26	—	Vcc	AE20	—	GND
AK2	—	GND	A15	O	SD0MON0	AE29	I/O	MDQ77	AE3	I	AUIN0	C9	I	HDEN	G27	O	SD16	AB26	—	GND	AE21	—	Vcc
AK3	I/O	MDQ1	A14	I	HDY8	AD29	I/O	MDQ80	AF3	I	MRW	C8	I	SYBYP	F27	O	SD12	AA26	I/O	MDQ93	AE22	—	Vcc
AK4	I/O	MDQ3	A13	I	HDY3	AC29	I/O	MDQ84	AG3	—	Vcc	C7	—	GND	E27	O	SDO2	Y26	—	Vcc	AE23	—	Vcc
AK5	—	Vcc	A12	I	HDC8	AB29	—	Vcc	AH3	O	MRW	C6	I/O	SYIO4	D27	O	HDY3	W26	I/O	MDQ100	AE24	—	GND
AK6	I/O	MDQ8	A11	I	HDC4	AA29	I/O	MDQ90	AH4	I/O	MDQ5	C5	I/O	SYIO1	D26	O	HDC9	V26	I/O	MDQ103	AE25	—	GND
AK7	I/O	MDQ12	A10	I	HDC0	Y29	—	GND	AH5	I/O	MDQ7	C4	—	Vcc	D25	—	GND	U26	—	Vcc	AD25	—	GND
AK8	—	Vcc	A9	I	HDF	W29	I/O	MDQ97	AH6	I/O	MDQ10	D4	O	CLK CKT27	D24	O	HDC2	T26	I/O	MDQ110	AC25	I/O	MDQ86
AK9	I/O	MDQ19	A8	—	GND	V29	I/O	MDQ101	AH7	I/O	MDQ13	E4	O	LOCK74	D23	O	HDEN	R26	I/O	MDQ115	AB25	—	Vcc
AK10	—	Vcc	A7	I/O	SYIO6	U29	—	GND	AH8	I/O	MDQ17	F4	I	PLLS74	D22	O	SDO11	P26	—	Vcc	AA25	—	Vcc
AK11	I/O	MDQ25	A6	—	Vcc	T29	I/O	MDQ107	AH9	—	GND	G4	I	GOROS	D21	I	SD08	N26	—	Vcc	Y25	—	GND
AK12	I/O	MDQ29	A5	I/O	SYIO0	R29	I/O	MDQ112	AH10	I/O	MDQ23	H4	—	GND	D20	I	SD04	M26	I/O	MDQ126	W25	—	GND
AK13	—	GND	A4	I	SYCS	P29	I/O	MDQ117	AH11	I/O	MDQ27	J4	—	GND	D19	I	SD0CK	L26	—	Vcc	V25	—	Vcc
AK14	I/O	MDQ37	A3	I	RST RESET	N29	I/O	MDQ119	AH12	I/O	MDQ31	K4	—	GND	D18	I	SD18	K26	O	SD08	U25	—	Vcc
AK15	I/O	MDQ39	A2	—	GND	M29	I/O	MDQ123	AH13	—	GND	L4	I	MST	D17	I	SD14	J26	O	SD04	T25	—	GND
AK16	I/O	MDQ44	B2	O	CLK CKT74	L29	O	SDO0	AH14	I/O	MDQ38	M4	I	TRST	D16	I	SD1CK	H26	—	Vcc	R25	—	GND
AK17	I/O	MDQ48	C2	—	Vcc	K29	O	SD06	AH15	I/O	MDQ41	N4	—	GND	D15	—	Vcc	G26	O	SD17	P25	—	Vcc
AK18	—	GND	D2	—	GND	J29	O	SD02	AH16	I/O	MDQ46	P4	O	TDO	D14	O	HDMON1	F26	O	SD13	N25	—	Vcc
AK19	I/O	MDQ53	E2	O	LOCK27	H29	O	SD19	AH17	I/O	MDQ49	R4	O	MON C6	D13	I	HDY6	E26	O	SDO5	M25	—	GND
AK20	I/O	MDQ58	F2	—	Vcc	G29	—	GND	AH18	—	Vcc	T4	O	MON C1	D12	I	HDY1	E25	O	SDO7	L25	—	GND
AK21	—	GND	G2	I	PLLMD1	F29	O	SD10	AH19	I/O	MDQ55	U4	O	MON Y7	D11	I	HDC7	E24	O	SDO8	K25	—	Vcc
AK22	O	MA1	H2	—	Vcc	E29	O	SDH	AH20	I/O	MDQ60	V4	O	MON Y2	D10	I	HDC3	E23	—	Vcc	J25	—	Vcc
AK23	O	MA5	J2	—	Vcc	D29	O	SDO4	AH21	I/O	MDQ62	W4	—	GND	D9	I	PDSCTL0	E22	O	SDO9	H25	O	SDO1
AK24	—	GND	K2	I	SMCK	C29	O	HDY9	AH22	O	MA2	Y4	I	TEST C8	D8	—	GND	E21	I	SD09	G25	—	GND
AK25	O	CKM74	L2	I	HDXF	B29	O	HDY6	AH23	—	GND	AA4	I	TEST C3	D7	—	Vcc	E20	—	Vcc	F25	—	GND
AK26	O	MCS	M2	I	HDXH	B28	O	HDY5	AH24	—	GND	AB4	I	TEST Y8	D6	I/O	SYIO5	E19	I	SD00	F24	—	GND
AK27	—	Vcc	N2	I	TDI	B27	O	HDY1	AH25	O	MA11	AC4	I	TEST Y4	D5	I/O	SYIO2	E18	I	SD19	F23	—	Vcc
AK28	I/O	MDQ64	P2	—	Vcc	B26	O	HDC7	AH26	O	MCAS	AD4	I	AUIN3	E5	—	Vcc	E17	—	Vcc	F22	—	Vcc
AK29	—	GND	R2	O	MON C4	B25	O	HDC4	AH27	O	MDQM	AE4	I	AUIN1	F5	O	PN7SL	E16	I	SD10	F21	—	Vcc
AK30	—	GND	T2	O	MON Y9	B24	—	GND	AH28	I/O	MDQ68	AF4	—	GND	G5	I	PN7ST	E15	O	SD1MON1	F20	—	GND
AJ30	—	GND	U2	O	MON Y5	B23	O	HDH	AG28	I/O	MDQ70	AG4	I/O	MDQ6	H5	—	Vcc	E14	—	Vcc	F19	—	GND
AH30	I/O	MDQ67	V2	—	GND	B22	—	GND	AF28	I/O	MDQ74	AG5	—	GND	J5	—	GND	E13	I	HDY7	F18	—	Vcc
AG30	—	Vcc	W2	O	MON SYNC	B21	I	SD06	AE28	—	GND	AG6	—	GND	K5	I	XTST	E12	I	HDY2	F17	—	Vcc
AF30	I/O	MDQ72	Y2	I	TEST C6	B20	I	SD02	AD28	I/O	MDQ81	AG7	I/O	MDQ14	L5	—	Vcc	E11	—	Vcc	F16	—	GND
AE30	—	GND	AA2	I	TEST C1	B19	I	SD0H	AC28	—	Vcc	AG8	—	Vcc	M5	I	TMS	E10	I	HDPBF	F15	—	GND
AD30	—	GND	AB2	I	TEST Y6	B18	I	SD16	AB28	—	GND	AG9	I/O	MDQ21	N5	I	TCK	E9	I	PDSCTL1	F14	—	Vcc
AC30	I/O	MDQ83	AC2	I	TEST Y2	B17	I	SD12	AA28	I/O	MDQ91	AG10	—	GND	P5	—	Vcc	E8	—	Vcc	F13	—	Vcc
AB30	I/O	MDQ87	AD2	I	TEST SYNC	B16	I	SD1H	Y28	I/O	MDQ95	AG11	I/O	MDQ28	R5	O	MON C7	E7	O	SYRW	F12	—	GND
AA30	I/O	MDQ89	AE2	—	Vcc	B15	O	SD0MON1	W28	I/O	MDQ98	AG12	I/O	MDQ32	T5	O	MON C2	E6	—	Vcc	F11	—	GND
Y30	I/O	MDQ94	AF2	O	MCMON1	B14	I	HDY9	V28	—	Vcc	AG13	I/O	MDQ35	U5	—	Vcc	F6	—	GND	F10	—	Vcc
W30	I/O	MDQ96	AG2	O	AUOUT3	B13	I	HDY4	U28	I/O	MDQ105	AG14	—	Vcc	V5	O	MON Y3	G6	—	GND	F9	—	Vcc
V30	—	Vcc	AH2	O	AUOUT1	B12	I	HDC9	T28	I/O	MDQ108	AG15	I/O	MDQ42	W5	—	Vcc	H6	I	PLLS27	F8	—	GND
U30	I/O	MDQ104	AJ2	I/O	MDQ0	B11	I	HDC5	R28	I/O	MDQ113	AG16	—	Vcc	Y5	—	Vcc	J6	—	Vcc	F7	—	GND

LM1881M (NS)
LM1881MX

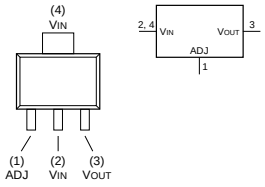
VIDEO SYNC SEPARATOR
—TOP VIEW—





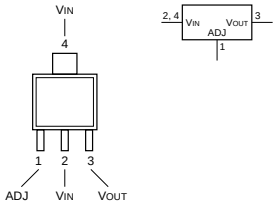
LM317SX (NS)

3-TERMINAL ADJUSTABLE NEGATIVE REGULATOR
—TOP VIEW—



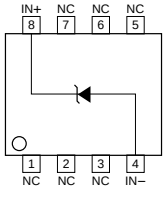
LM337IMP (NS)

3-TERMINAL ADJUSTABLE NEGATIVE REGULATOR
—TOP VIEW—



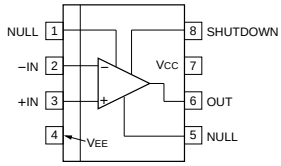
LM385M-1.2 (NS)
LM385MX-1.2

MICROPOWER VOLTAGE REFERENCE DIODE
—TOP VIEW—



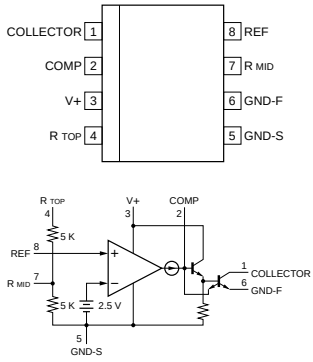
LT1227CS8 (LINEAR TECH)
LT1227CS8-E2

HIGH SPEED OPERATIONAL AMPLIFIER
—TOP VIEW—



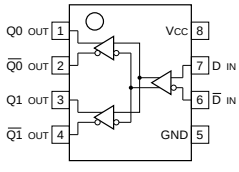
LT1431CS8-E1 (LINEAR TECH)

PROGRAMMABLE REFERENCE
—TOP VIEW—



MC10EL11DR2 (MOTOROLA)

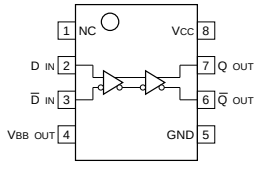
ECL 1:2 DIFFERENTIAL FANOUT BUFFER
—TOP VIEW—



D ; DATA INPUT
Q0, Q1 ; DATA OUTPUT

MC10EL16DR2 (MOTOROLA)

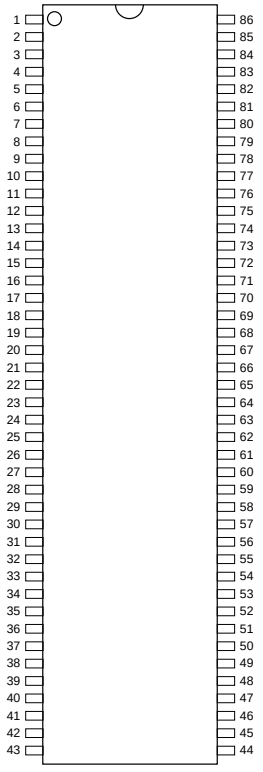
ECL DIFFERENTIAL RECEIVER
—TOP VIEW—



D ; DATA INPUT
Q ; DATA OUTPUT
VBB ; REFERENCE VOLTAGE OUTPUT

MB811643242A-100FN (FUJITSU)

64M (512K×32×4)-BIT SDRAM
—TOP VIEW—



PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	—	VCC	44	—	GND
2	I/O	DQ0	45	I	DQ24
3	—	VCC	46	—	GND
4	I/O	DQ1	47	I	DQ25
5	I/O	DQ2	48	I	DQ26
6	—	GND	49	—	VCC
7	I/O	DQ3	50	I	DQ27
8	I/O	DQ4	51	I	DQ28
9	—	VCC	52	—	GND
10	I/O	DQ5	53	I	DQ29
11	I/O	DQ6	54	I	DQ30
12	—	GND	55	—	VCC
13	I/O	DQ7	56	I	DQ31
14	—	NC	57	—	NC
15	—	VCC	58	—	GND
16	I	DQM0	59	I	DQM3
17	I	$\overline{WE}$	60	I	A3
18	I	$\overline{CAS}$	61	I	A4
19	I	$\overline{RAS}$	62	I	A5
20	I	$\overline{CS}$	63	I	A6
21	—	NC	64	I	A7
22	I	A12	65	I	A8
23	I	A11	66	I	A9
24	I	A10/AP	67	I	CKE
25	I	A0	68	I	CLK
26	I	A1	69	—	NC
27	I	A2	70	—	NC
28	I	DQM2	71	I	DQM1
29	—	VCC	72	—	GND
30	—	NC	73	—	NC
31	I	DQ16	74	I	DQ8
32	—	GND	75	—	VCC
33	I	DQ17	76	I	DQ9
34	I	DQ18	77	I	DQ10
35	—	VCC	78	—	GND
36	I	DQ19	79	I	DQ11
37	I	DQ20	80	I	DQ12
38	—	GND	81	—	VCC
39	I	DQ21	82	I	DQ13
40	I	DQ22	83	I	DQ14
41	—	VCC	84	—	GND
42	I	DQ23	85	I	DQ15
43	—	VCC	86	—	GND

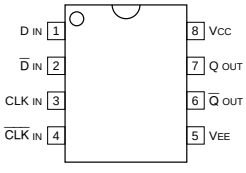
INPUTS
A0 - A10 : ADDRESS
A11, A12 : BANK SELECT
$\overline{AP}$: AUTO PRECHARGE ENABLE
$\overline{CAS}$: COLUMN ADDRESS STROBE
CKE : CLOCK ENABLE
CLK : CLOCK
$\overline{CS}$: CHIP SELECT
DQM0 - DQM3 : INPUT MASK/OUTPUT ENABLE
$\overline{RAS}$: ROW ADDRESS STROBE
$\overline{WE}$: WRITE ENABLE

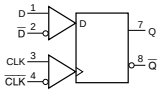
INPUTS/OUTPUTS
DQ0 - DQ31 : DATA

OTHER
NC : NO CONNECTION

MC10EL52DR2 (MOTOROLA)

D FLIP-FLOP WITH DIFFERENTIAL DATA AND CLOCK
—TOP VIEW—



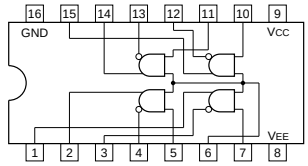


INPUTS		OUTPUTS
D	CK	Q
0	↑	0
1	↑	1

0 : LOW LEVEL
1 : HIGH LEVEL

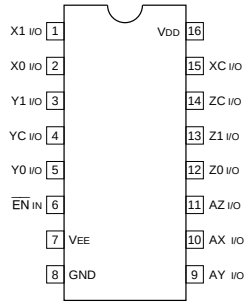
MC10H124M (MOTOROLA)
MC10H124MEL

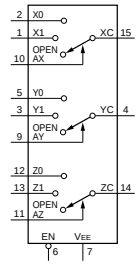
ECL TTL-TO-ECL TRANSLATOR
—TOP VIEW—



MC14053BF (MOTOROLA)

C-MOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXERS/DEMULTIPLEXERS
—TOP VIEW—



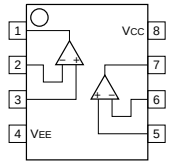


CONT. INPUTS		ON
EN	A (X, Y, Z)	CHANNEL
0	0	0
0	1	1
1	×	OPEN

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

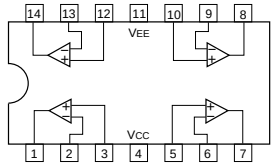
MC34182DR2
MC34182M (MOTOROLA)

DUAL OPERATIONAL AMPLIFIERS
(DUAL-SUPPLY TYPE)
—TOP VIEW—



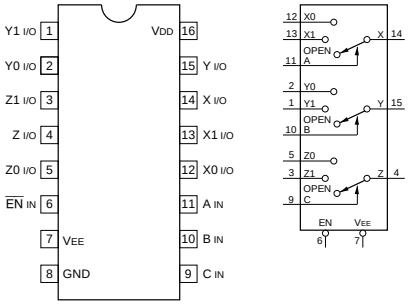
MC34184DR2 (MOTOROLA)

OPERATIONAL AMPLIFIER
(J FET INPUT)
—TOP VIEW—



MC74HC4053FEL (MOTOROLA)
TC74HC4053AFT(EL) (TOSHIBA)

C-MOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER
—TOP VIEW—

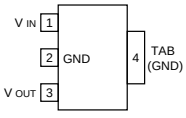


CONTROL INPUTS				ON CHANNEL		
EN	SELECT					
	C	B	A			
0	0	0	0	Z0	Y0	X0
0	0	0	1	Z0	Y0	X1
0	0	1	0	Z0	Y1	X0
0	0	1	1	Z0	Y1	X1
0	1	0	0	Z1	Y0	X0
0	1	0	1	Z1	Y0	X1
0	1	1	0	Z1	Y1	X0
0	1	1	1	Z1	Y1	X1
1	×	×	×	OPEN		

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

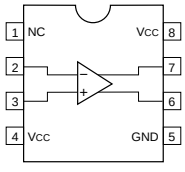
MIC5201-3.3BS (MICREL)

LOW DROP-OUT VOLTAGE REGULATOR
—TOP VIEW—



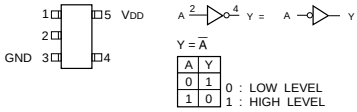
NJM360M (JRC)
NJM360M-TE2

HIGH SPEED VOLTAGE COMPARATOR
—TOP VIEW—



SC7S04F (MOTOROLA)
TC7S04F(TE85R)

C-MOS INVERTER
—TOP VIEW—



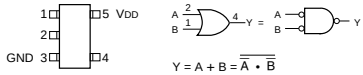
$Y = \overline{A}$

A	Y
0	1
1	0

0 : LOW LEVEL
1 : HIGH LEVEL

SC7S32F (MOTOROLA)
TC7S32F(TE85R)
TC7SH32FU-TE85R (TOSHIBA)

C-MOS 2-INPUT OR GATE
—TOP VIEW—



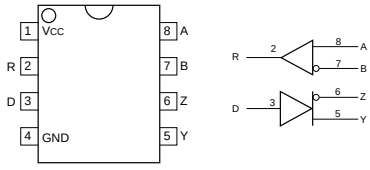
$Y = A + B = \overline{\overline{A} \cdot \overline{B}}$

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

0 : LOW LEVEL
1 : HIGH LEVEL

SN75179BPS (TI)
SN75179BPS-E05

DIFFERENTIAL BUS DRIVER/RECEIVER
—TOP VIEW—



–DRIVER–

INPUT	OUTPUTS	
D	Y	Z
H	H	L
L	L	H

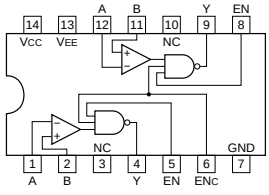
–RECEIVER–

DIFFERENTIAL INPUTS	OUTPUTS
A - B	R
$V_{ID} \geq 0.2$ V	H
-0.2 V < V_{ID} < 0.2 V	?
$V_{ID} \leq -0.2$ V	L

H : HIGH LEVEL L : LOW LEVEL ? : INDETERMINATE

SN75207BNS (TI)
SN75207BNS-E05

BIPOLAR LINE RECEIVER
—TOP VIEW—



INPUTS			OUT
B – A	EN	ENC	Y
B – A ≧ 10 mV	×	0	1
	0	×	1
	1	1	0
|B – A| < 10 mV	×	0	1
	0	×	1
	1	1	✻
B – A ≦ –10 mV	×	×	1

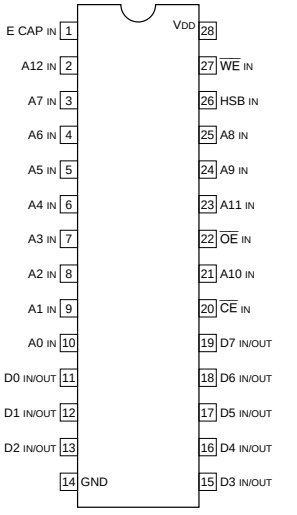
0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE
✻ : INDETERMINATE

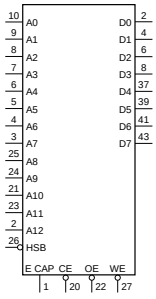
http://getMANUAL.com

STK12C68-S45 (SIMTEK)

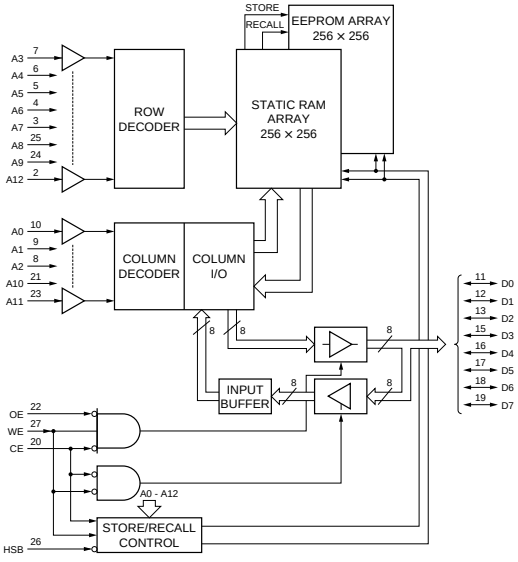
C-MOS 64 K (8,192 × 8)-BIT NONVOLATILE SRAM

—TOP VIEW—





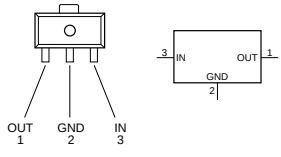
A0 - A12 : ADDRESS INPUTS
$\overline{CE}$: CHIP ENABLE INPUT
D0 - D7 : DATA INPUTS/OUTPUTS
E CAP : EXTERNAL CAPACITOR
$\overline{HSB}$: HARDWARE STORE/BUSY
$\overline{OE}$: OUTPUT ENABLE INPUT
$\overline{WE}$: WRITE ENABLE INPUT



TA78L09F (TOSHIBA)+9 V (100 mA)

POSITIVE VOLTAGE REGULATOR

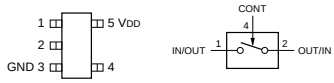
—SIDE VIEW—



TC4S66F (TOSHIBA)
TC4S66F(TE85R)

C-MOS BILATERAL ANALOG SWITCH

—TOP VIEW—



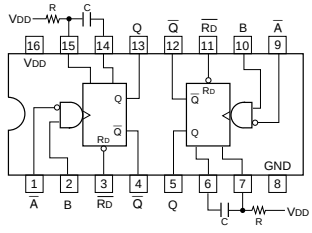
CONT	SWITCH
0	OFF
1	ON

0 : LOW LEVEL
1 : HIGH LEVEL

TC74VHC123AFT(EL) (TOSHIBA)

C-MOS DUAL RETRIGGERABLE MONOSTABLE MULTIVIBRATORS

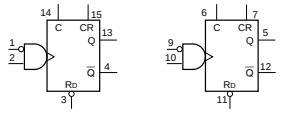
—TOP VIEW—



INPUTS			OUTPUTS	
$\overline{RD}$	A	B	Q	$\overline{Q}$
0	×	×	0	1
1	1	×	0	1
1	×	0	0	1
1	0	↑	⌐	⌐
1	↓	1	⌐	⌐
↑	0	1	⌐	⌐

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

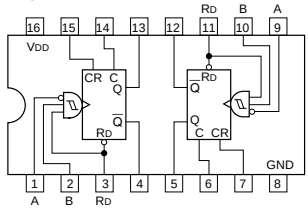
OUTPUT PULSE WIDTH = 0.46 CR



TC74VHC221AFT(EL) (TOSHIBA)

C-MOS MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT

—TOP VIEW—



INPUTS			OUTPUTS	
$\overline{RD}$	A	B	Q	$\overline{Q}$
0	×	×	0	1
×	1	×	0	1
×	×	0	0	1
1	0	↑	⌐	⌐
1	↓	1	⌐	⌐
↑	0	1	⌐	⌐

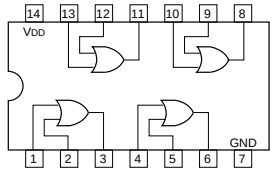
0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

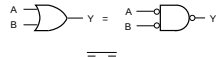
OUTPUT PULSE WIDTH = 0.7CR

TC74VHC32FT(EL) (TOSHIBA)

C-MOS QUAD 2-INPUT OR GATES

—TOP VIEW—



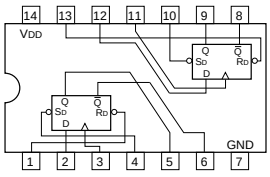


A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

0 : LOW LEVEL
1 : HIGH LEVEL

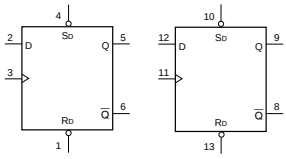
TC74VHC74FT(EL) (TOSHIBA)

C-MOS DUAL D-TYPE FLIP-FLOPS WITH DIRECT SET/RESET
—TOP VIEW—



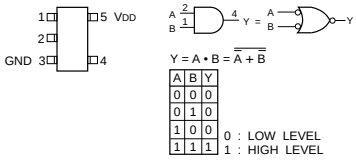
INPUTS				OUTPUTS	
$\overline{SD}$	$\overline{RD}$	CK	D	Qn+1	$\overline{Qn+1}$
0	1	×	×	1	0
1	0	×	×	0	1
0	0	×	×	1	1
1	1	↑	1	1	0
1	1	↑	0	0	1
1	1	0	×	Qn	$\overline{Qn}$

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE



TC7S08F (TOSHIBA)
TC7S08F(TE85R)

C-MOS 2-INPUT AND GATE
—TOP VIEW—

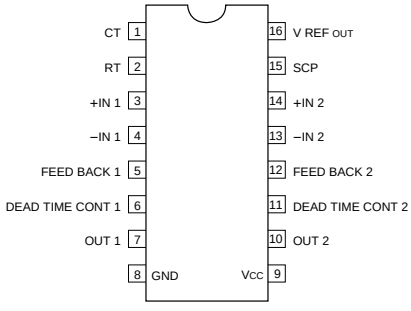


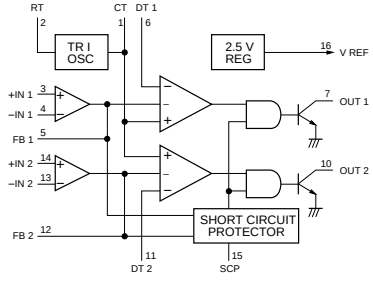
A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

0 : LOW LEVEL
1 : HIGH LEVEL

TL1451ACPWR (TI)

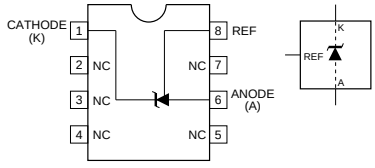
DUAL PWM POWER CONTROLLER
—TOP VIEW—





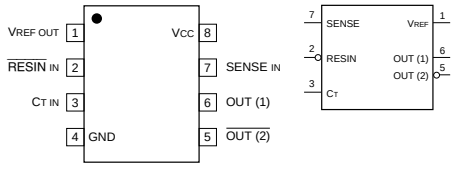
TL431CPS (TI)
TL431CPSR

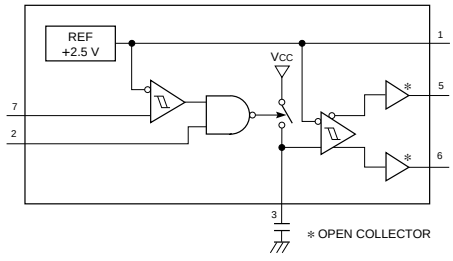
ADJUSTABLE PRECISION SHUNT REGULATOR
—TOP VIEW—



TL7705ACPS (TI)
TL7705ACPSR

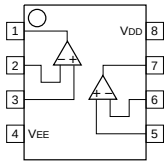
POWER VOLTAGE SUPERVISOR
—TOP VIEW—





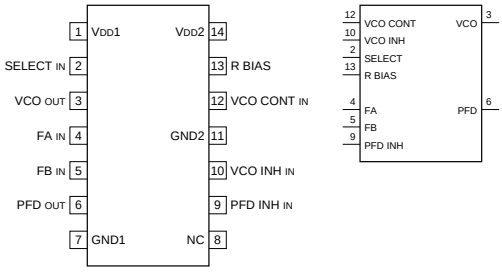
TLC272CPW-E05 (TI)

C-MOS DUAL OPERATIONAL AMPLIFIERS
(SINGLE-SUPPLY TYPE)
—TOP VIEW—



TLC2932IPW-E20 (TI)

C-MOS VCO AND PHASE FREQUENCY DETECTOR
—TOP VIEW—



INPUT

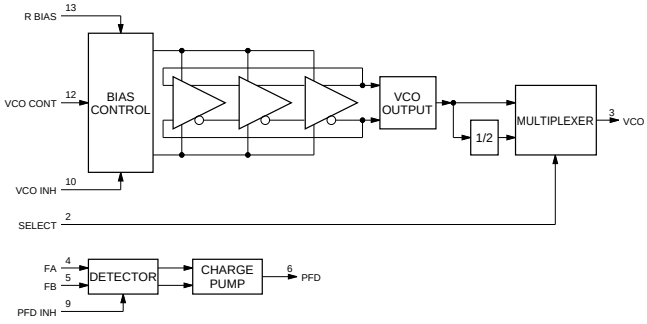
FA	:	REFERENCE FREQUENCY
FB	:	INPUT FREQUENCY FROM OUTSIDE COUNTER
PFD INH	:	PFD INHIBIT
SELECT	:	VCO OUTPUT FREQUENCY SELECT
VCO CONT	:	VCO CONTROL VOLTAGE
VCO INH	:	VCO INHIBIT

OUTPUT

PFD	:	PHASE FREQUENCY DETECTOR
VCO	:	VOLTAGE CONTROLLED OSCILLATOR

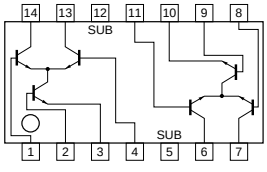
OTHER

R BIAS	:	BIAS RESISTOR FOR VCO OSCILLATION FREQUENCY SETTING



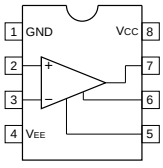
UPA102G (NEC)

HIGH FREQUENCY PNP TRANSISTOR ARRAY
—TOP VIEW—



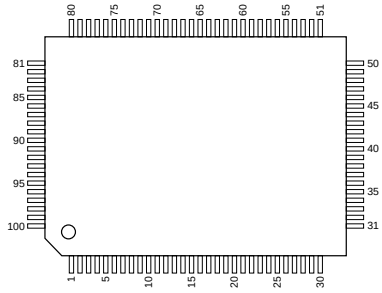
UPC311G2 (NEC)
UPC311G2-E2

VOLTAGE COMPARATOR
—TOP VIEW—



XC95108-15TQ100C (XILINX)

IN-SYSTEM PROGRAMMABLE CPLD
—TOP VIEW—



PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I/O	I/O	26	—	VCC	51	—	VCC	76	I/O	I/O
2	I/O	I/O	27	I/O	I/O/GCK3	52	I/O	I/O	77	I/O	I/O
3	I/O	I/O/GTS1	28	I/O	I/O	53	I/O	I/O	78	I/O	I/O
4	I/O	I/O/GTS2	29	I/O	I/O	54	I/O	I/O	79	I/O	I/O
5	—	VCC	30	I/O	I/O	55	I/O	I/O	80	I/O	I/O
6	I/O	I/O	31	—	GND	56	I/O	I/O	81	I/O	I/O
7	I/O	I/O	32	I/O	I/O	57	—	VCC	82	I/O	I/O
8	I/O	I/O	33	I/O	I/O	58	I/O	I/O	83	O	TDO
9	I/O	I/O	34	I/O	I/O	59	I/O	I/O	84	—	GND
10	I/O	I/O	35	I/O	I/O	60	I/O	I/O	85	I/O	I/O
11	I/O	I/O	36	I/O	I/O	61	I/O	I/O	86	I/O	I/O
12	I/O	I/O	37	I/O	I/O	62	—	GND	87	I/O	I/O
13	I/O	I/O	38	—	VCC	63	I/O	I/O	88	—	VCC
14	I/O	I/O	39	I/O	I/O	64	I/O	I/O	89	I/O	I/O
15	I/O	I/O	40	I/O	I/O	65	I/O	I/O	90	I/O	I/O
16	I/O	I/O	41	I/O	I/O	66	I/O	I/O	91	I/O	I/O
17	I/O	I/O	42	I/O	I/O	67	I/O	I/O	92	I/O	I/O
18	I/O	I/O	43	I/O	I/O	68	I/O	I/O	93	I/O	I/O
19	I/O	I/O	44	—	GND	69	—	GND	94	I/O	I/O
20	I/O	I/O	45	I	TDI	70	I/O	I/O	95	I/O	I/O
21	—	GND	46	I/O	I/O	71	I/O	I/O	96	I/O	I/O
22	I/O	I/O/GCK1	47	I	TMS	72	I/O	I/O	97	I/O	I/O
23	I/O	I/O/GCK2	48	I	TCK	73	I/O	I/O	98	—	VCC
24	I/O	I/O	49	I/O	I/O	74	I/O	I/O	99	I/O	I/O/GSR
25	I/O	I/O	50	I/O	I/O	75	—	GND	100	—	GND

INPUTS

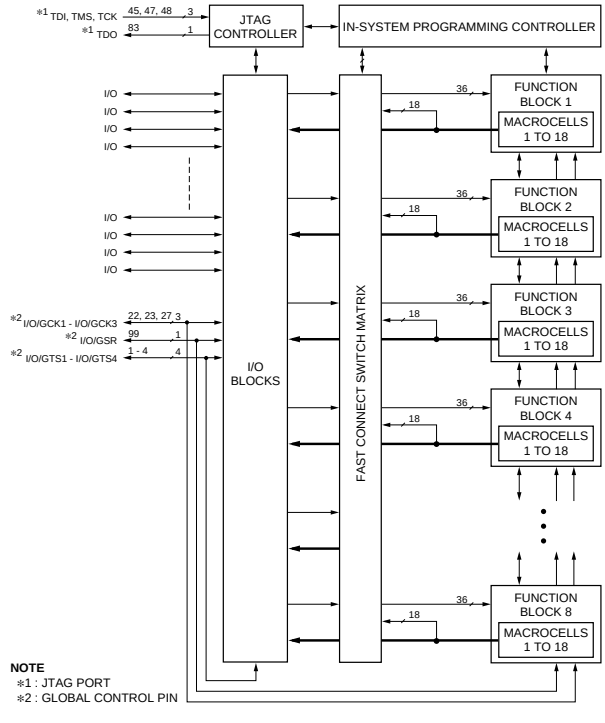
TCK	:	JTAG CLOCK
TDI	:	JTAG DATA
TMS	:	JTAG MODE SELECT

INPUTS/OUTPUTS

I/O/GCK1 - I/O/GCK3	:	GLOBAL CONTROL
I/O/GSR	:	GLOBAL CONTROL
I/O/GTS1 - I/O/GTS4	:	GLOBAL CONTROL

OUTPUT

TDO	:	JTAG DATA

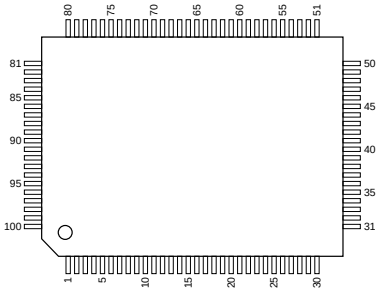


NOTE
*1 : JTAG PORT
*2 : GLOBAL CONTROL PIN

XC95144-10TQ100C (XILINX)

IN-SYSTEM PROGRAMMABLE CPLD

—TOP VIEW—



PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I/O	I/O/GTS3	26	—	VCC	51	—	VCC	76	I/O	I/O
2	I/O	I/O/GTS4	27	I/O	I/O/GCK3	52	I/O	I/O	77	I/O	I/O
3	I/O	I/O/GTS1	28	I/O	I/O	53	I/O	I/O	78	I/O	I/O
4	I/O	I/O/GTS2	29	I/O	I/O	54	I/O	I/O	79	I/O	I/O
5	—	VCC	30	I/O	I/O	55	I/O	I/O	80	I/O	I/O
6	I/O	I/O	31	—	GND	56	I/O	I/O	81	I/O	I/O
7	I/O	I/O	32	I/O	I/O	57	—	VCC	82	I/O	I/O
8	I/O	I/O	33	I/O	I/O	58	I/O	I/O	83	O	TDO
9	I/O	I/O	34	I/O	I/O	59	I/O	I/O	84	—	GND
10	I/O	I/O	35	I/O	I/O	60	I/O	I/O	85	I/O	I/O
11	I/O	I/O	36	I/O	I/O	61	I/O	I/O	86	I/O	I/O
12	I/O	I/O	37	I/O	I/O	62	—	GND	87	I/O	I/O
13	I/O	I/O	38	—	VCC	63	I/O	I/O	88	—	VCC
14	I/O	I/O	39	I/O	I/O	64	I/O	I/O	89	I/O	I/O
15	I/O	I/O	40	I/O	I/O	65	I/O	I/O	90	I/O	I/O
16	I/O	I/O	41	I/O	I/O	66	I/O	I/O	91	I/O	I/O
17	I/O	I/O	42	I/O	I/O	67	I/O	I/O	92	I/O	I/O
18	I/O	I/O	43	I/O	I/O	68	I/O	I/O	93	I/O	I/O
19	I/O	I/O	44	—	GND	69	—	GND	94	I/O	I/O
20	I/O	I/O	45	I	TDI	70	I/O	I/O	95	I/O	I/O
21	—	GND	46	I/O	I/O	71	I/O	I/O	96	I/O	I/O
22	I/O	I/O/GCK1	47	I	TMS	72	I/O	I/O	97	I/O	I/O
23	I/O	I/O/GCK2	48	I	TCK	73	I/O	I/O	98	—	VCC
24	I/O	I/O	49	I/O	I/O	74	I/O	I/O	99	I/O	I/O/GSR
25	I/O	I/O	50	I/O	I/O	75	—	GND	100	—	GND

INPUTS

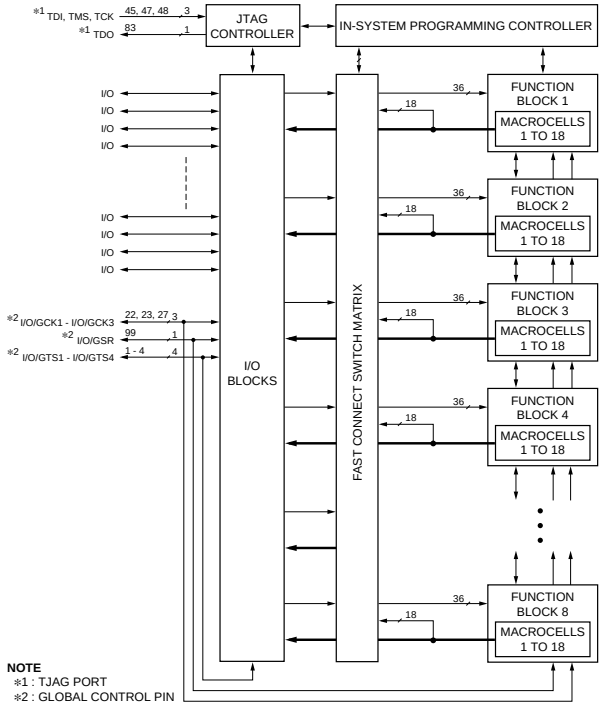
TCK : JTAG CLOCK
TDI : JTAG DATA
TMS : JTAG MODE SELECT

INPUTS/OUTPUTS

I/O/GCK1 - I/O/GCK3 : GLOBAL CONTROL
I/O/GSR : GLOBAL CONTROL
I/O/GTS1 - I/O/GTS4 : GLOBAL CONTROL

OUTPUT

TDO : JTAG DATA

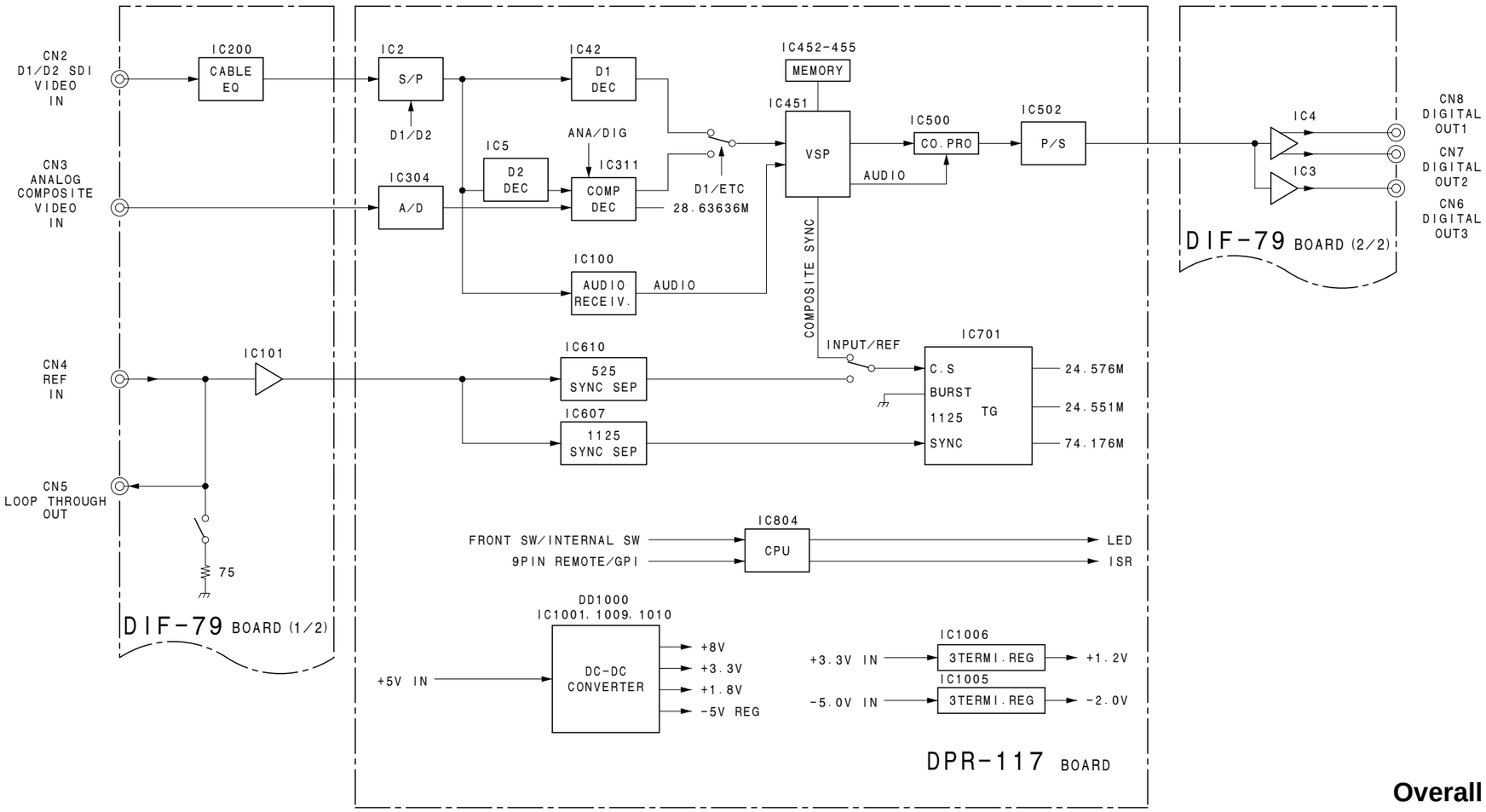


NOTE

*1 : TJAG PORT
*2 : GLOBAL CONTROL PIN

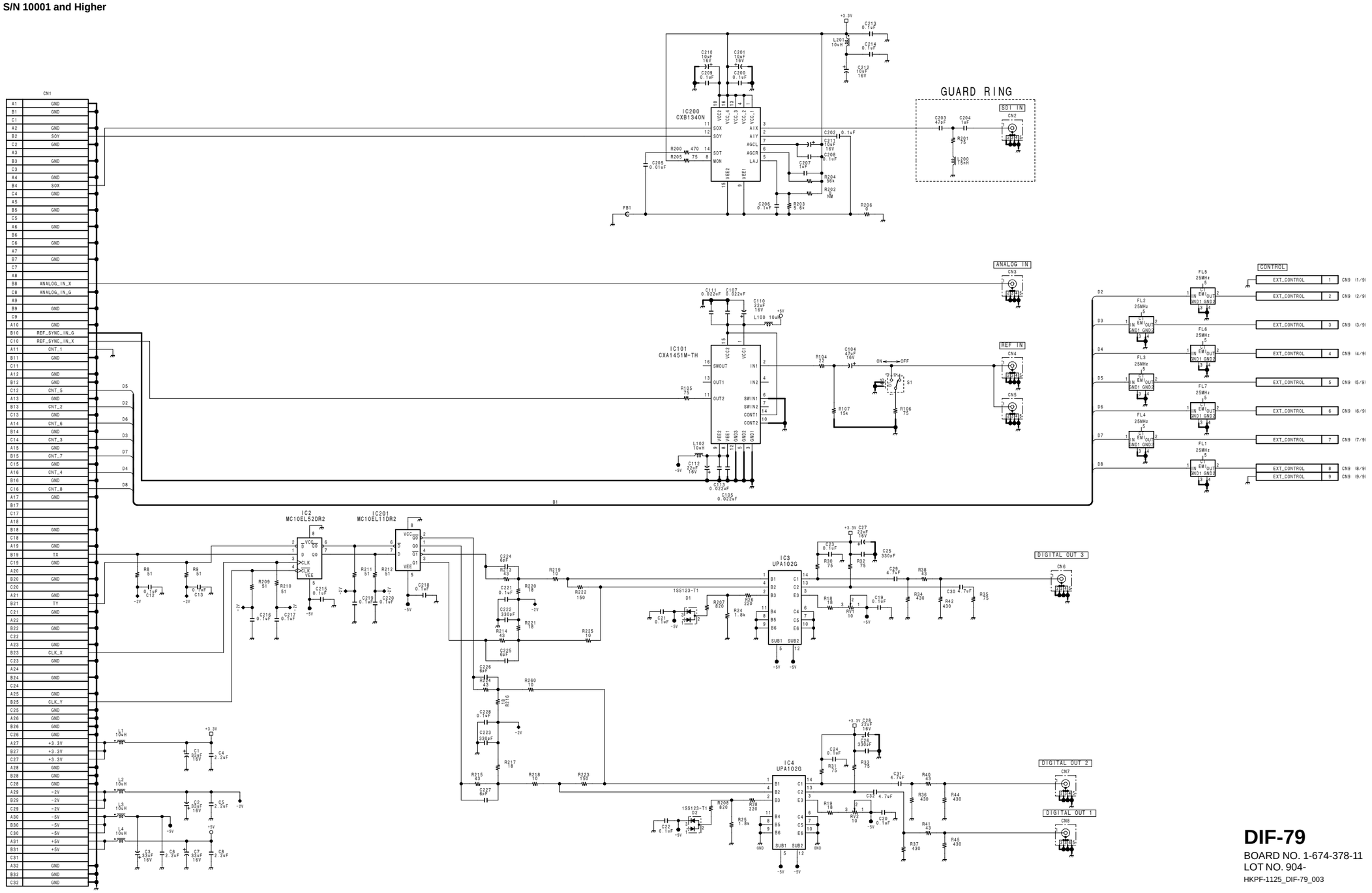
Section 7
Block Diagram

HKPF-11125 (UCJ) : S/N 10001 and Higher



Section 8
Schematic Diagrams

HKPF-1125 (UCJ) : S/N 10001 and Higher

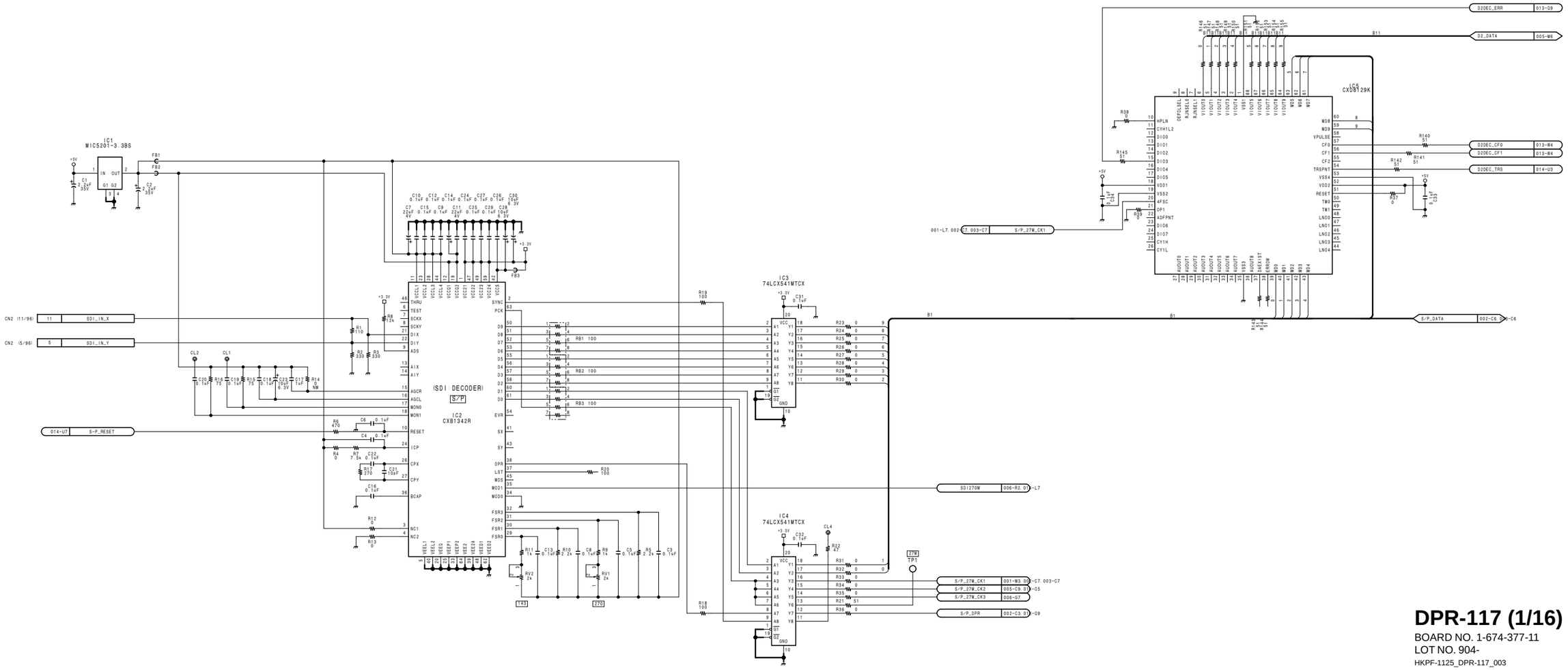


DIF-79

BOARD NO. 1-674-378-11
LOT NO. 904-
HKPF-1125_DIF-79_003

DPR-117 (1/16)

HKPF-1125 (UCJ) : S/N 10001 and Higher

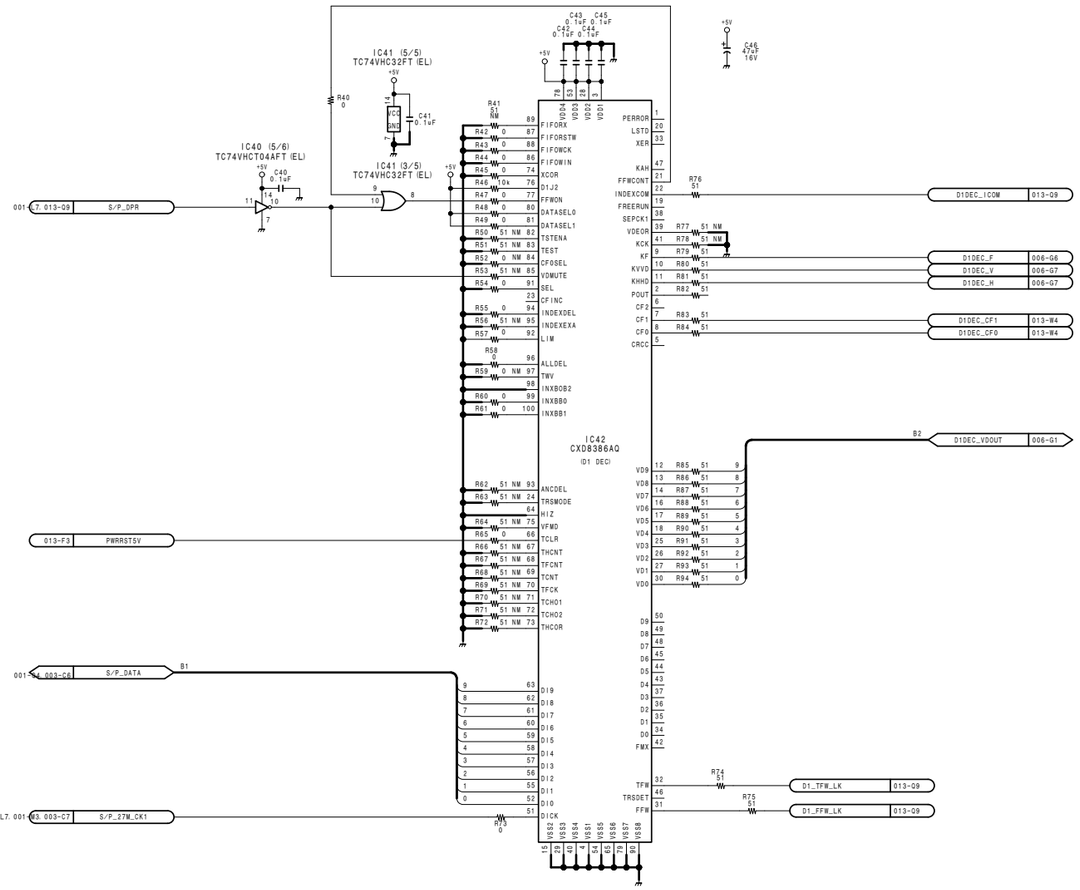


DPR-117 (1/16)

BOARD NO. 1-674-377-11
LOT NO. 904-
HKPF-1125_DPR-117_003

DPR-117 (2/16)

HKPF-1125 (UCJ) : S/N 10001 and Higher



DPR-117 (2/16)

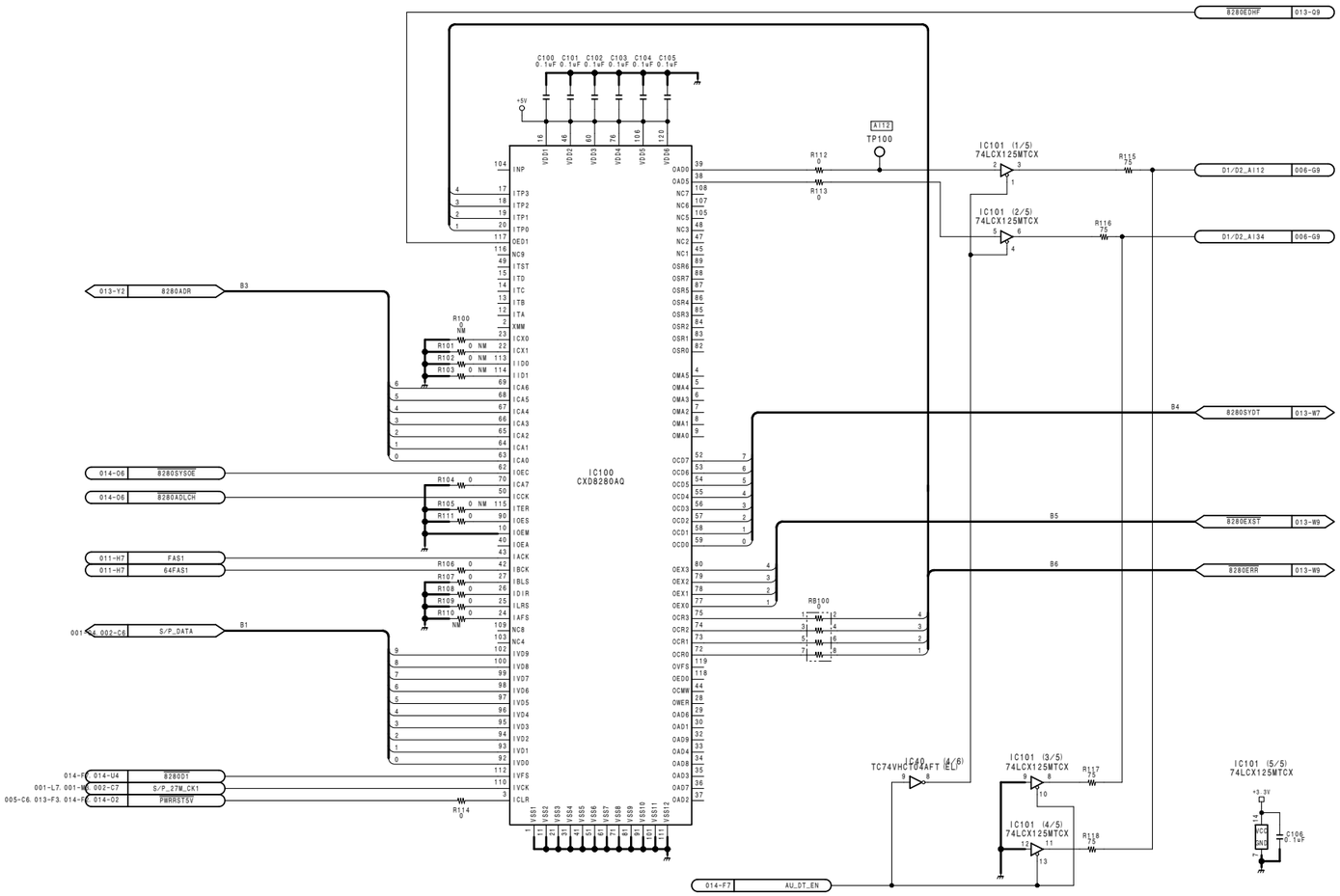
BOARD NO. 1-674-377-11
LOT NO. 904-

HKPF-1125_DPR-117_003

http://getMANUAL.com

 DPR-117 (3/16)

HKPF-1125 (UCJ) : S/N 10001 and Higher



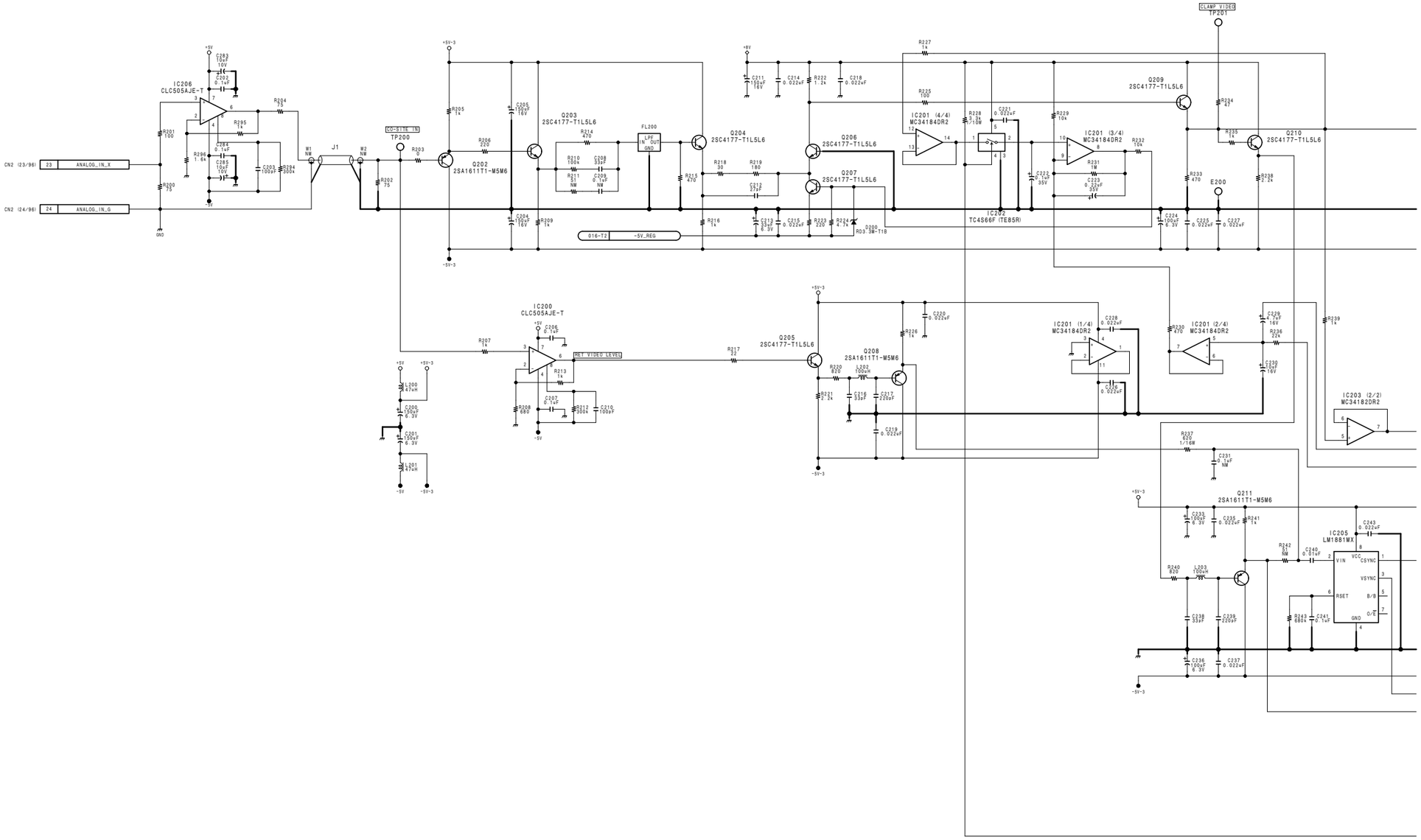
DPR-117 (3/16)

BOARD NO. 1-674-377-11
LOT NO. 904-

HKPF-1125_DPR-117_003

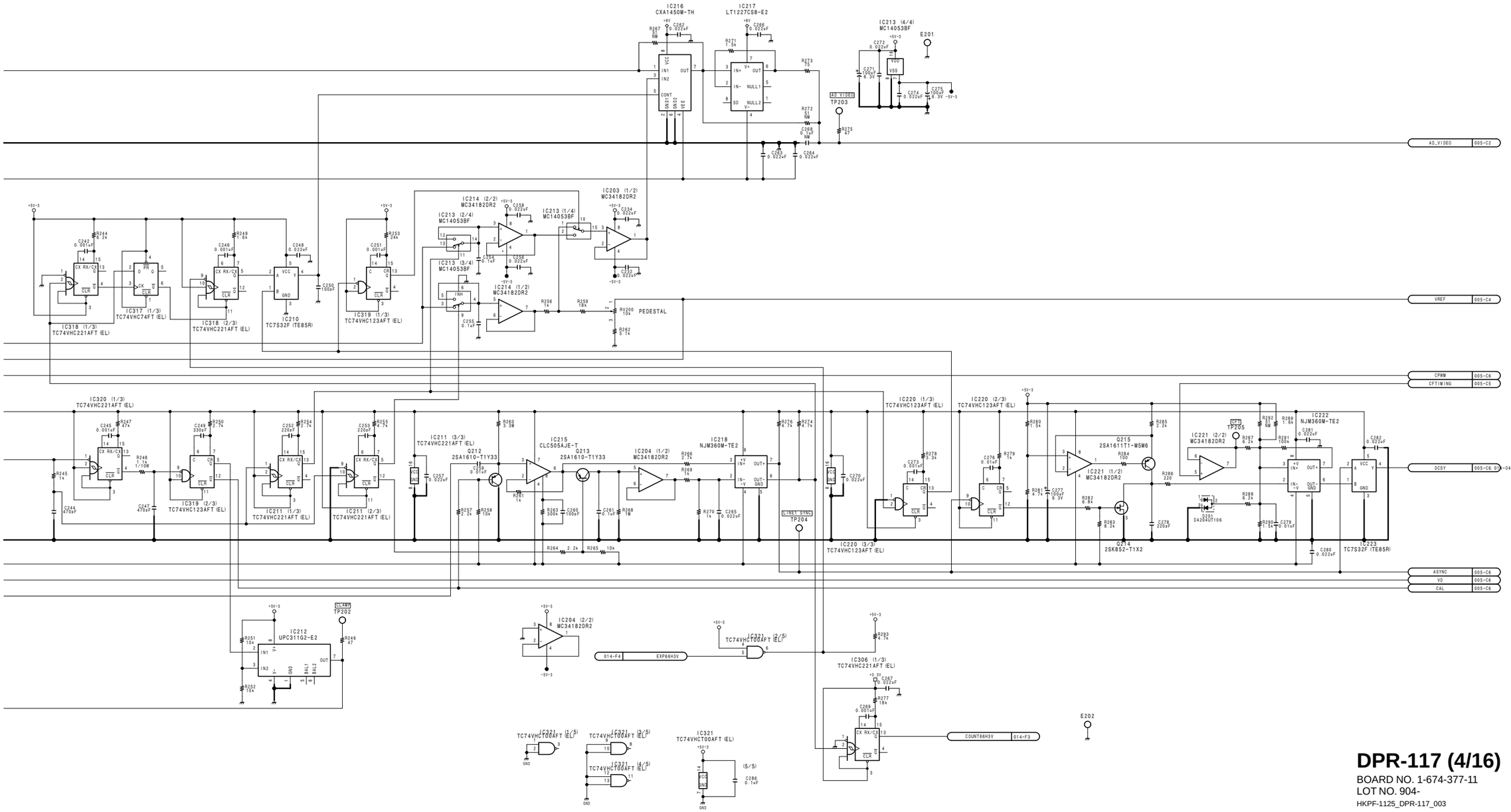
DPR-117 (4/16)

HKPF-1125 (UCJ) : S/N 10001 and Higher



8-6

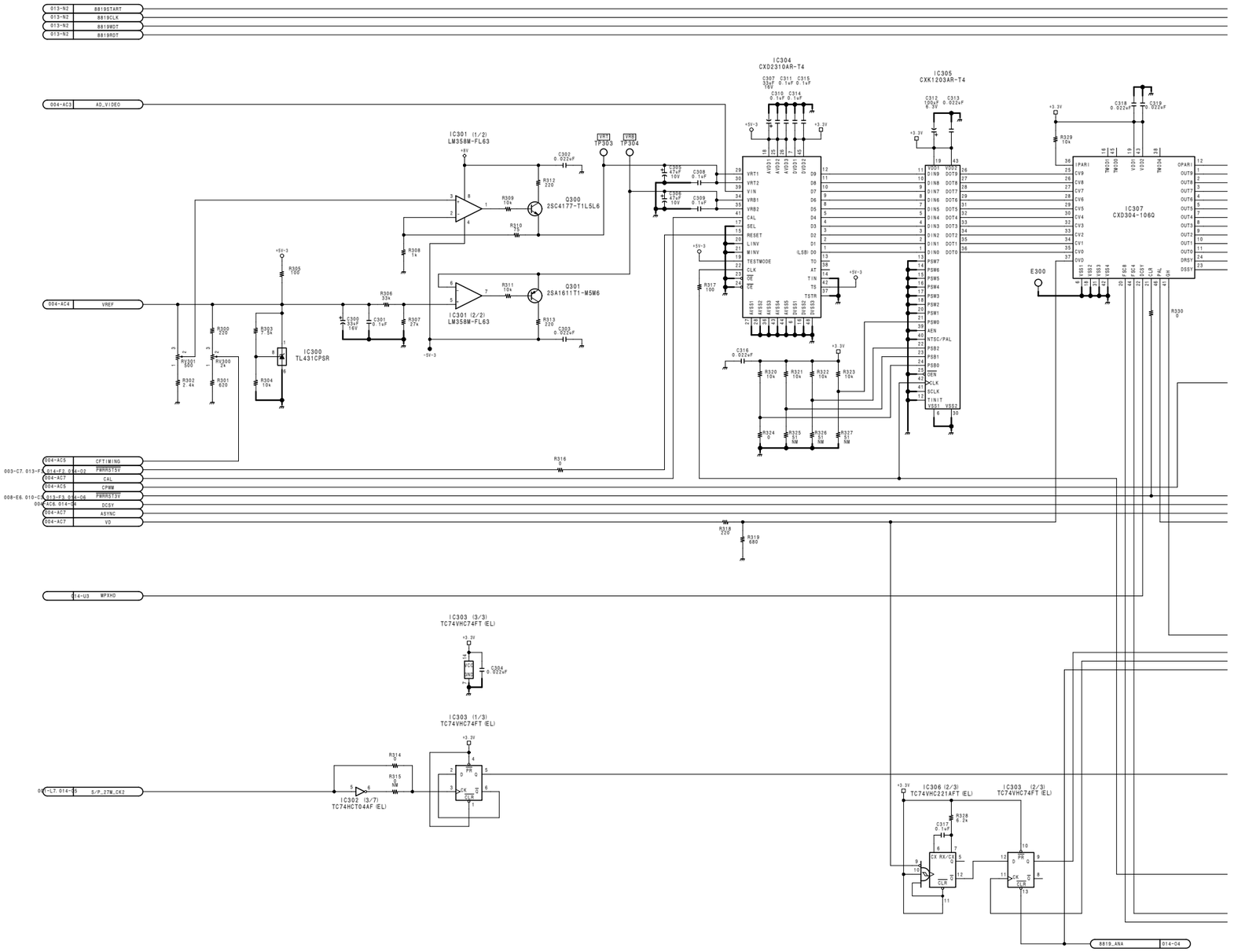
DPR-117 (4/16)



DPR-117 (4/16)
BOARD NO. 1-674-377-11
LOT NO. 904-
HKPF-1125_DPR-117_003

DPR-117 (5/16)

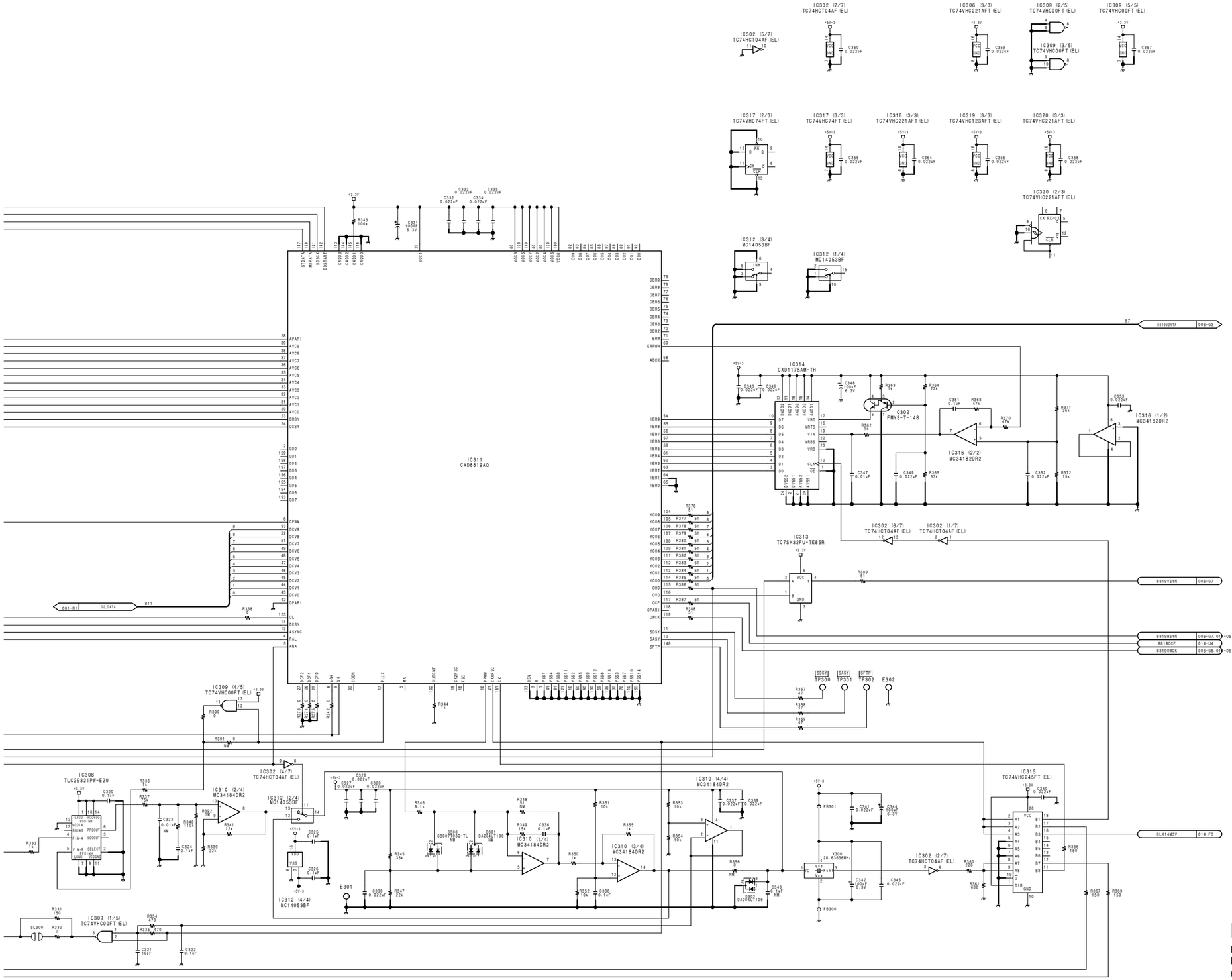
HKPF-1125 (UCJ) : S/N 10001 and Higher



8-8

HKPF-1125 MM

DPR-117 (5/16)



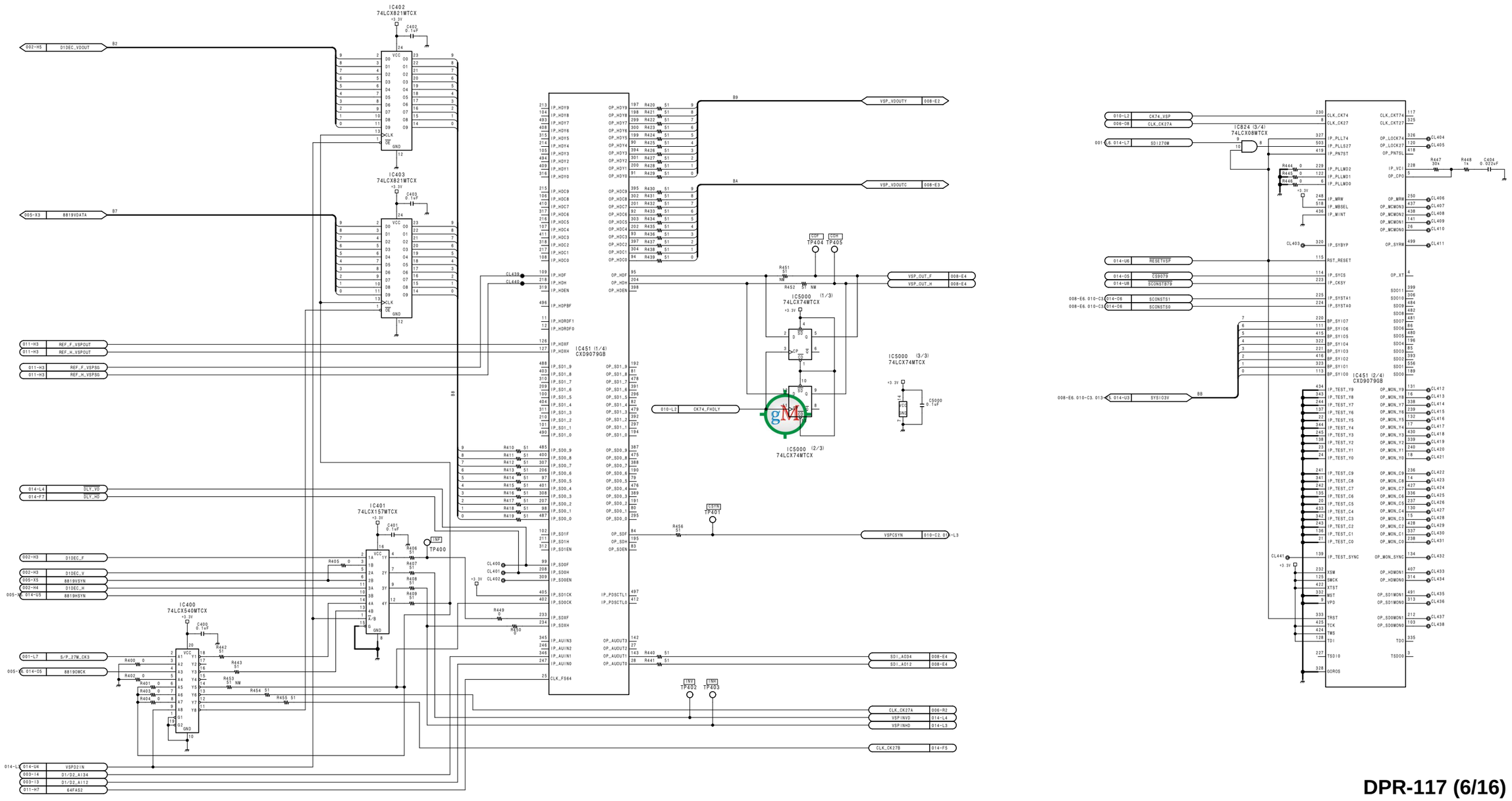
DPR-117 (5/16)

BOARD NO. 1-674-377-11
LOT NO. 904-

HKPF-1125_DPR-117_003

DPR-117 (6/16)

HKPF-1125 (UCJ) : S/N 10001 and Higher



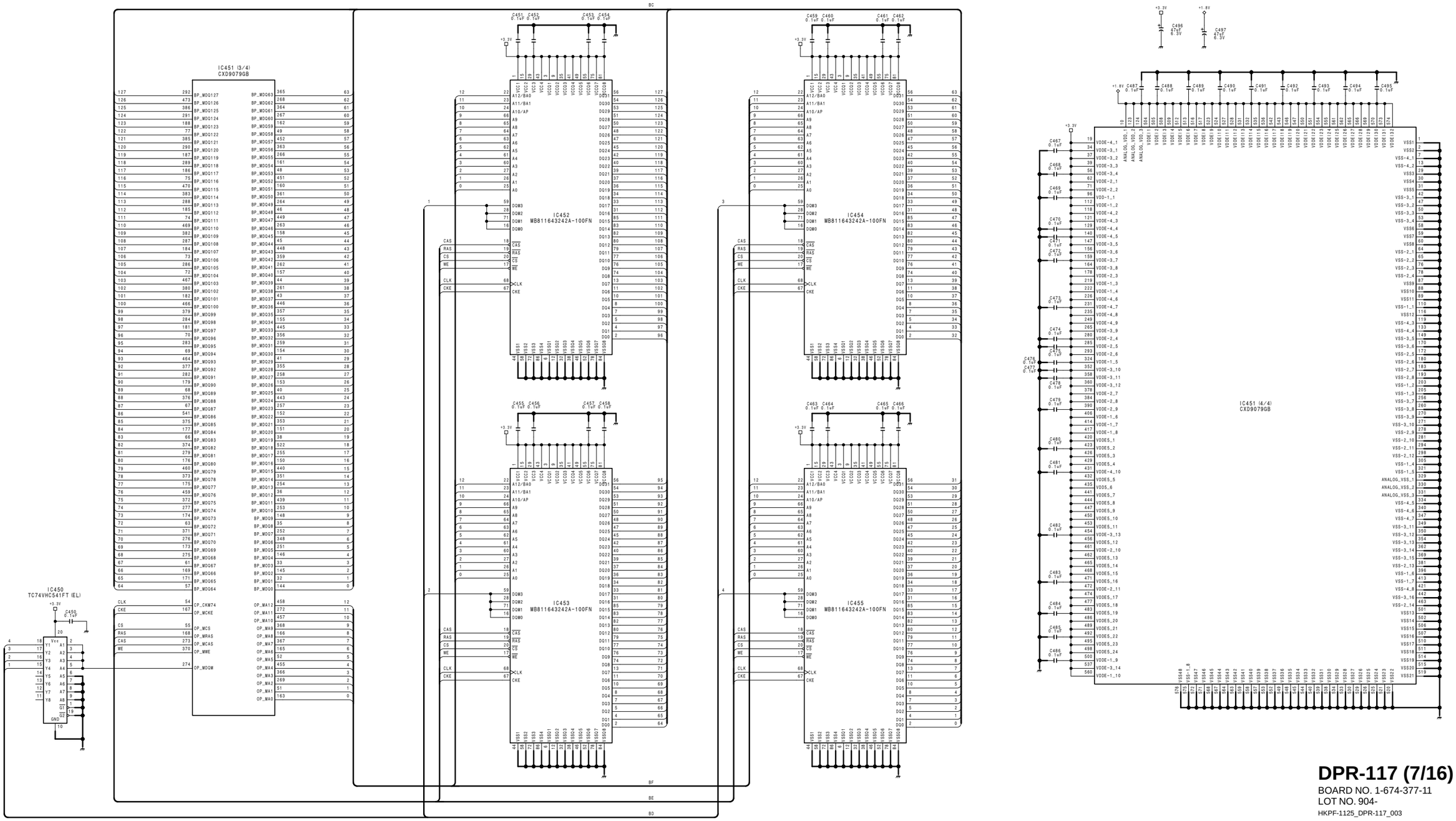
DPR-117 (6/16)

BOARD NO. 1-674-377-11
LOT NO. 904-

HKPF-1125_DPR-117_003

DPR-117 (7/16)

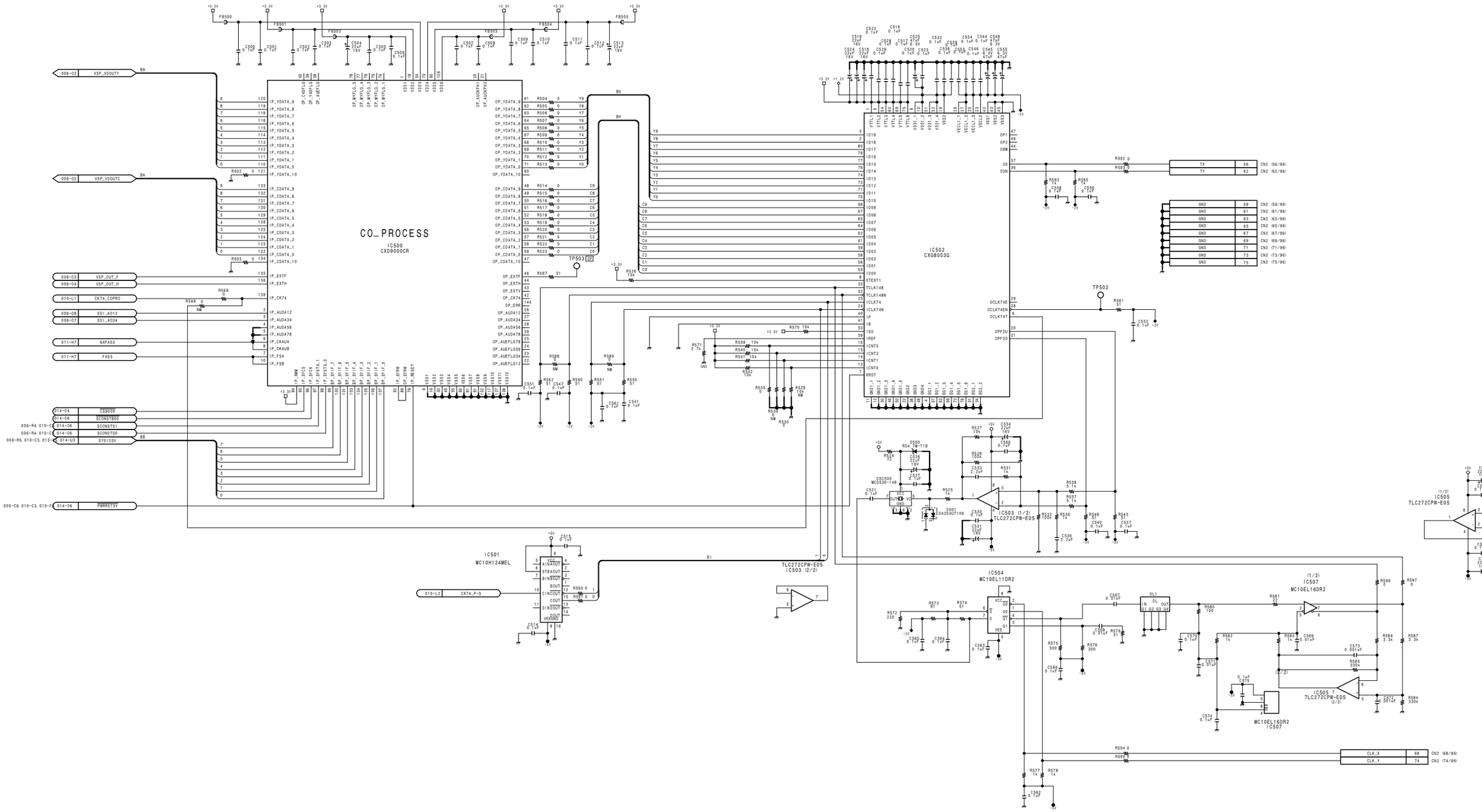
HKPF-1125 (UCJ) : S/N 10001 and Higher



DPR-117 (7/16)
BOARD NO. 1-674-377-11
LOT NO. 904-
HKPF-1125_DPR-117_003

DPR-117 (8/16)

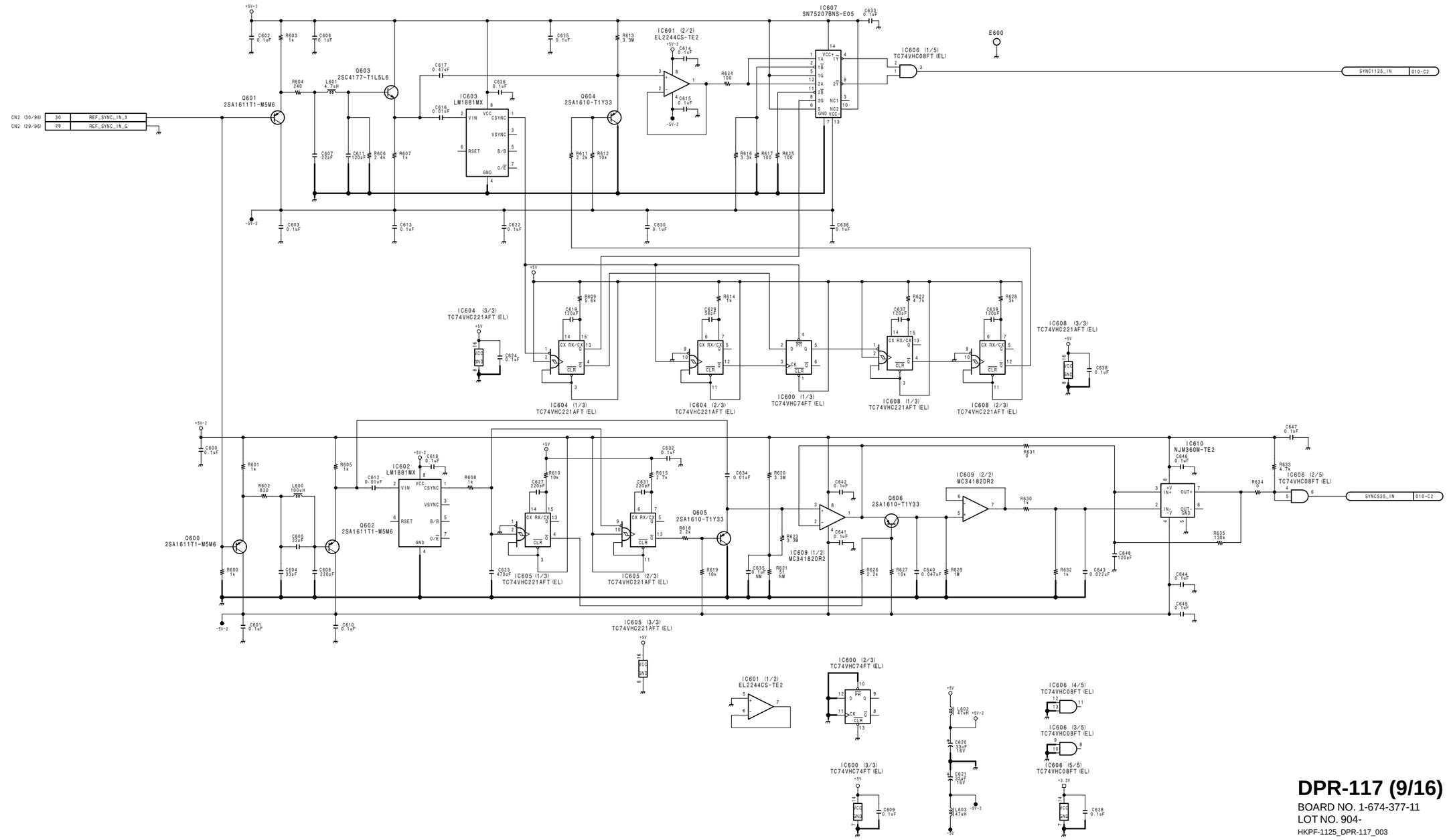
HKPF-1125 (UCJ) : S/N 10001 and Higher



DPR-117 (8/16)
BOARD NO. 1-674-377-11
LOT NO. 904-
HKPF-1125_DPR-117_003

DPR-117 (9/16)

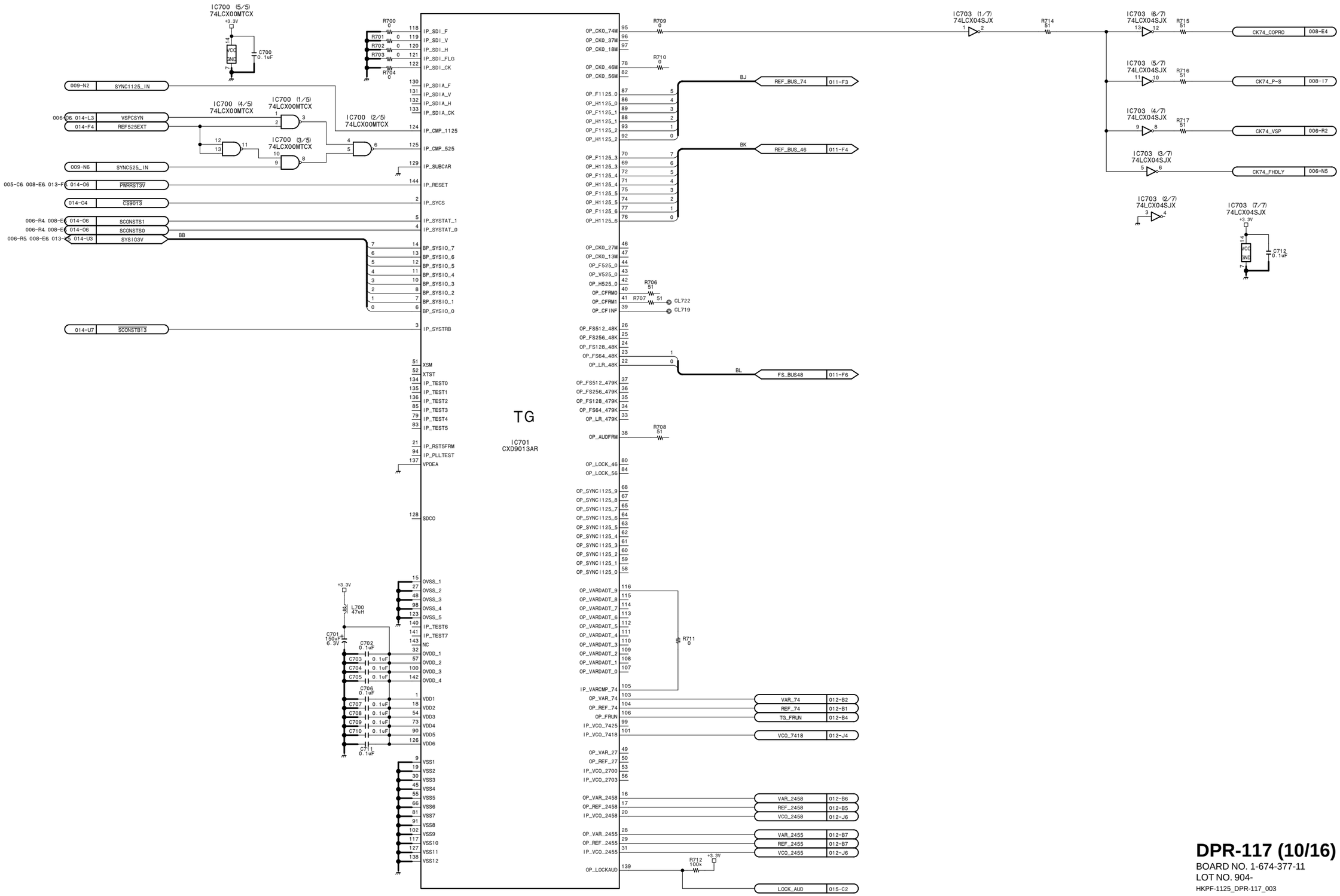
HKPF-1125 (UCJ) : S/N 10001 and Higher



DPR-117 (9/16)
BOARD NO. 1-674-377-11
LOT NO. 904-
HKPF-1125_DPR-117_003

DPR-117 (10/16)

HKPF-1125 (UCJ) : S/N 10001 and Higher



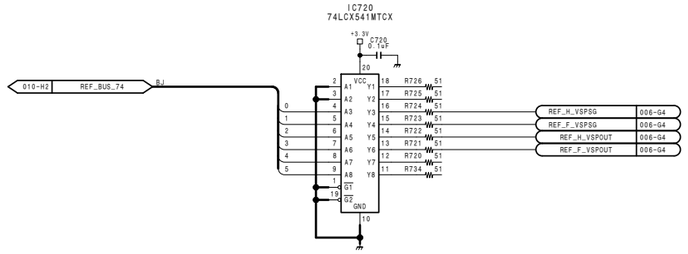
8-14 8-14

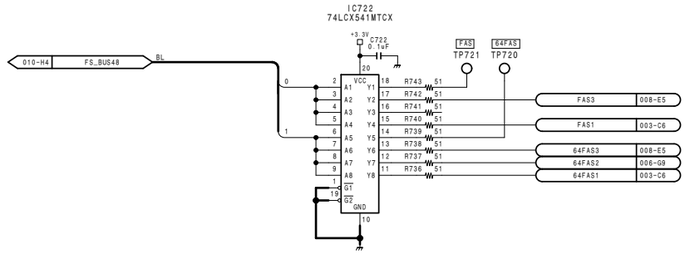
DPR-117 (10/16)
BOARD NO. 1-674-377-11
LOT NO. 904-
HKPF-1125_DPR-117_003

HKPF-1125 MM

http://getMANUAL.com
 DPR-117 (11/16)

HKPF-1125 (UCJ) : S/N 10001 and Higher



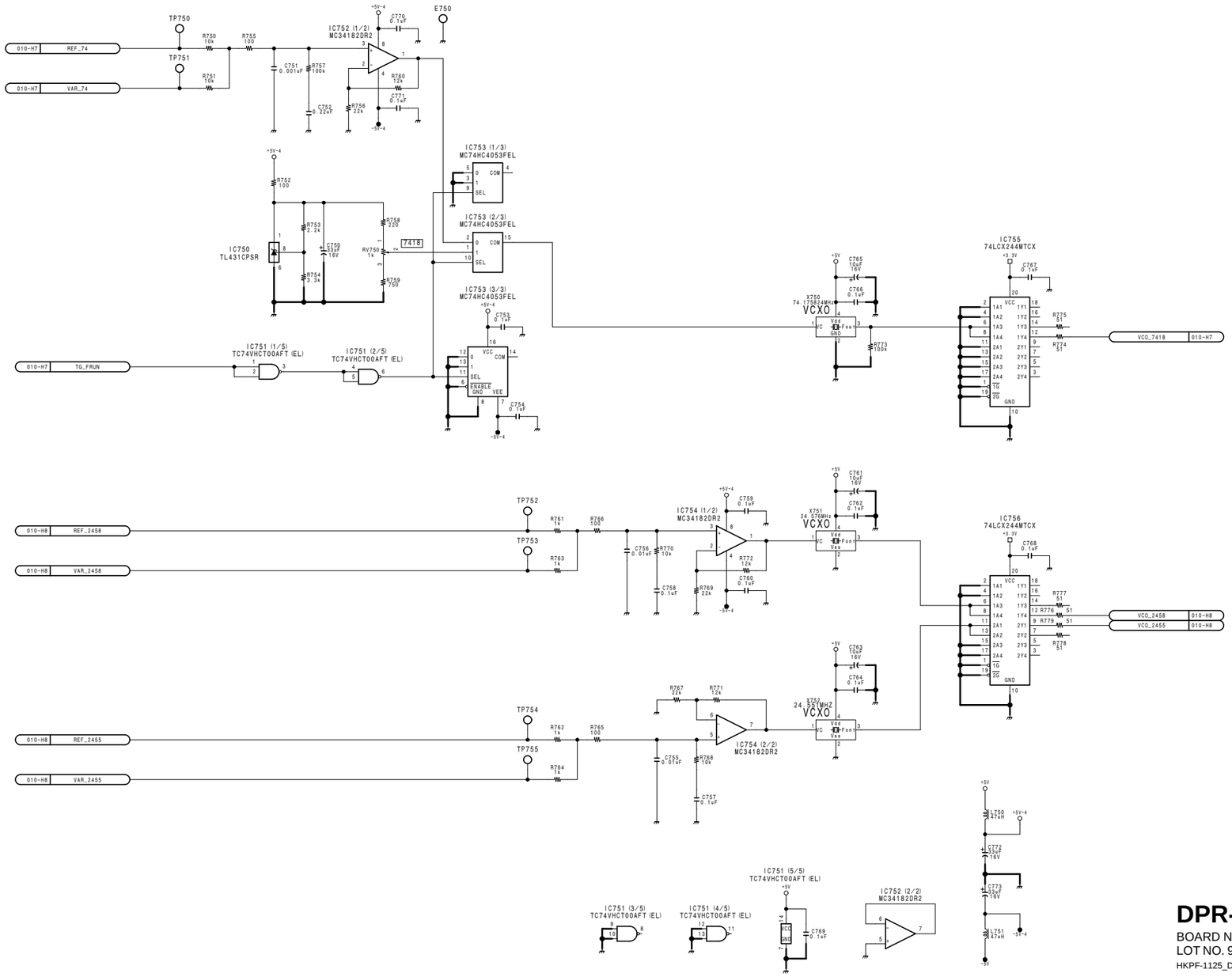


DPR-117 (11/16)

BOARD NO. 1-674-377-11
LOT NO. 904-
HKPF-1125_DPR-117_003

DPR-117 (12/16)

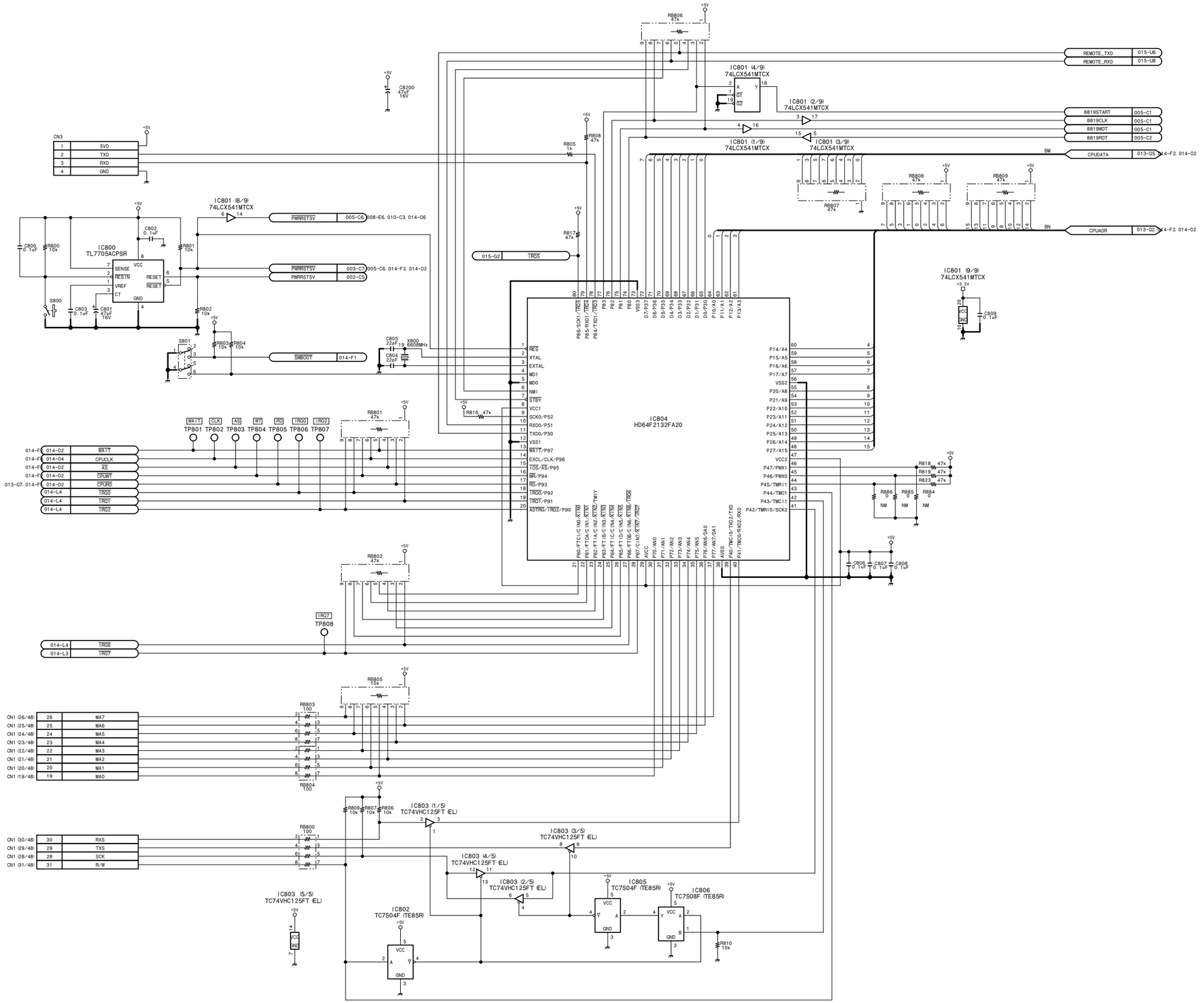
HKPF-1125 (UCJ) : S/N 10001 and Higher



DPR-117 (12/16)
BOARD NO. 1-674-377-11
LOT NO. 904-
HKPF-1125_DPR-117_003

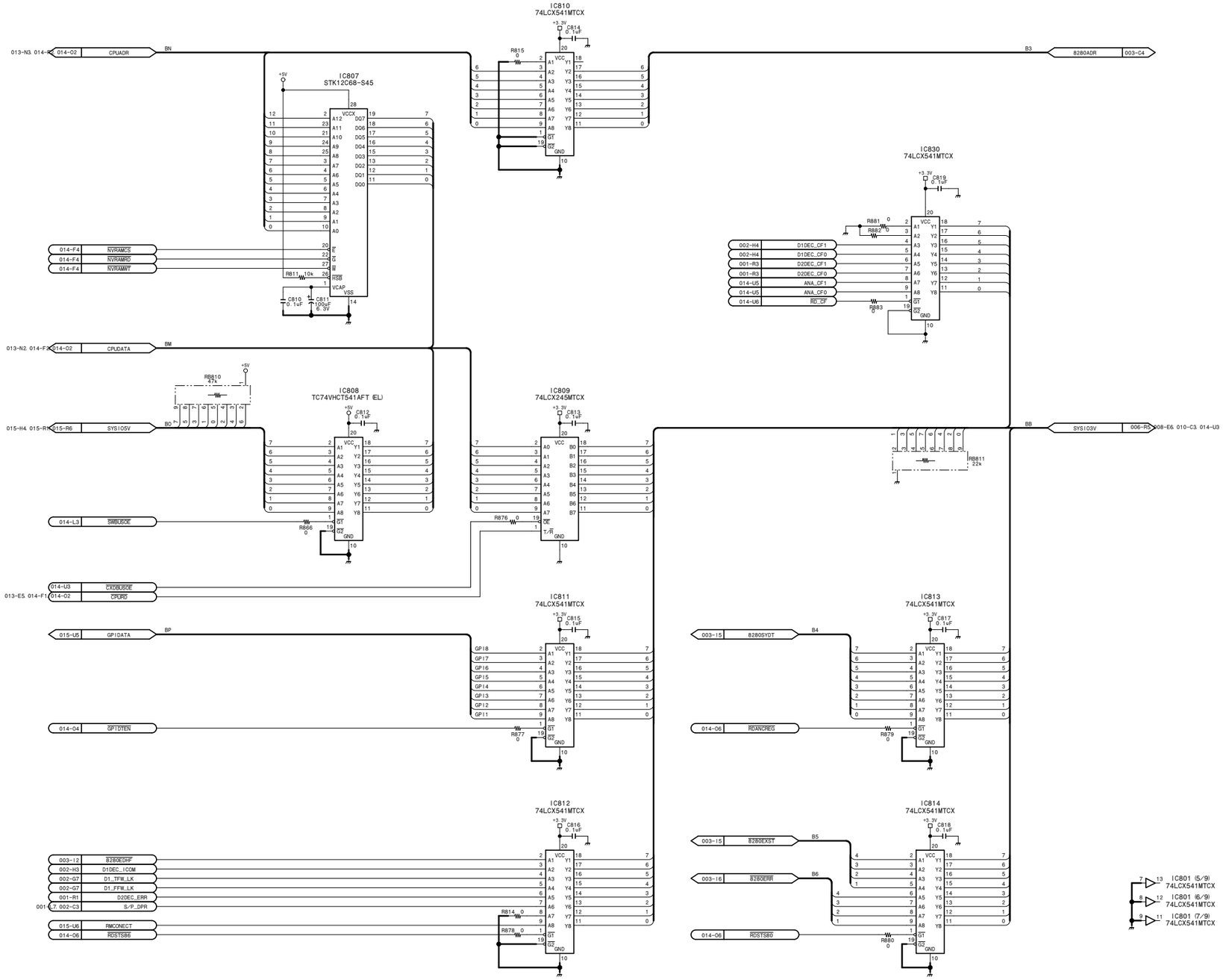
DPR-117 (13/16)

HKPF-1125 (UCJ) : S/N 10001 and Higher



8-18

DPR-117 (13/16)

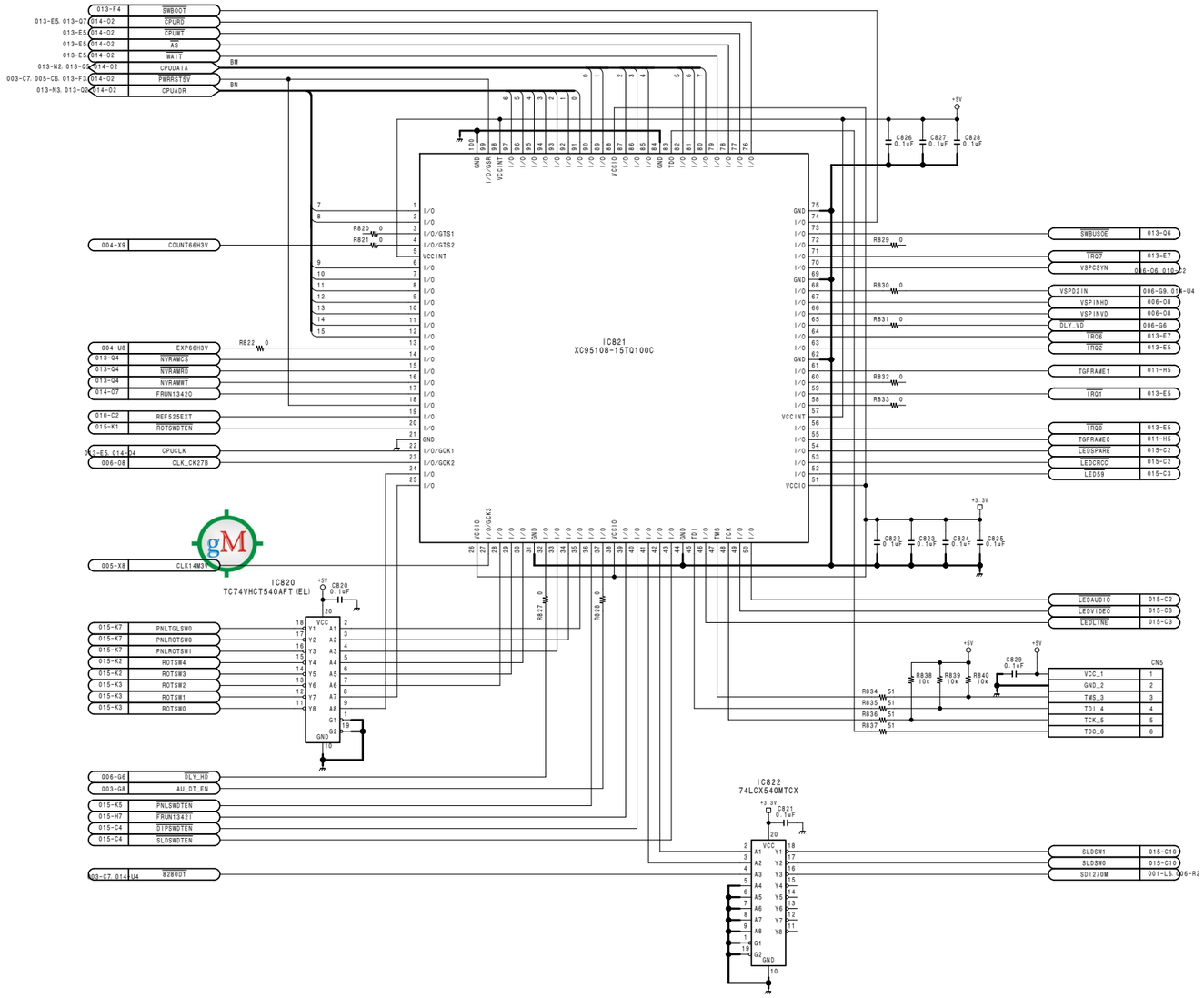


DPR-117 (13/16)

BOARD NO. 1-674-377-11
LOT NO. 904-
HKPF-1125_DPR-117_003

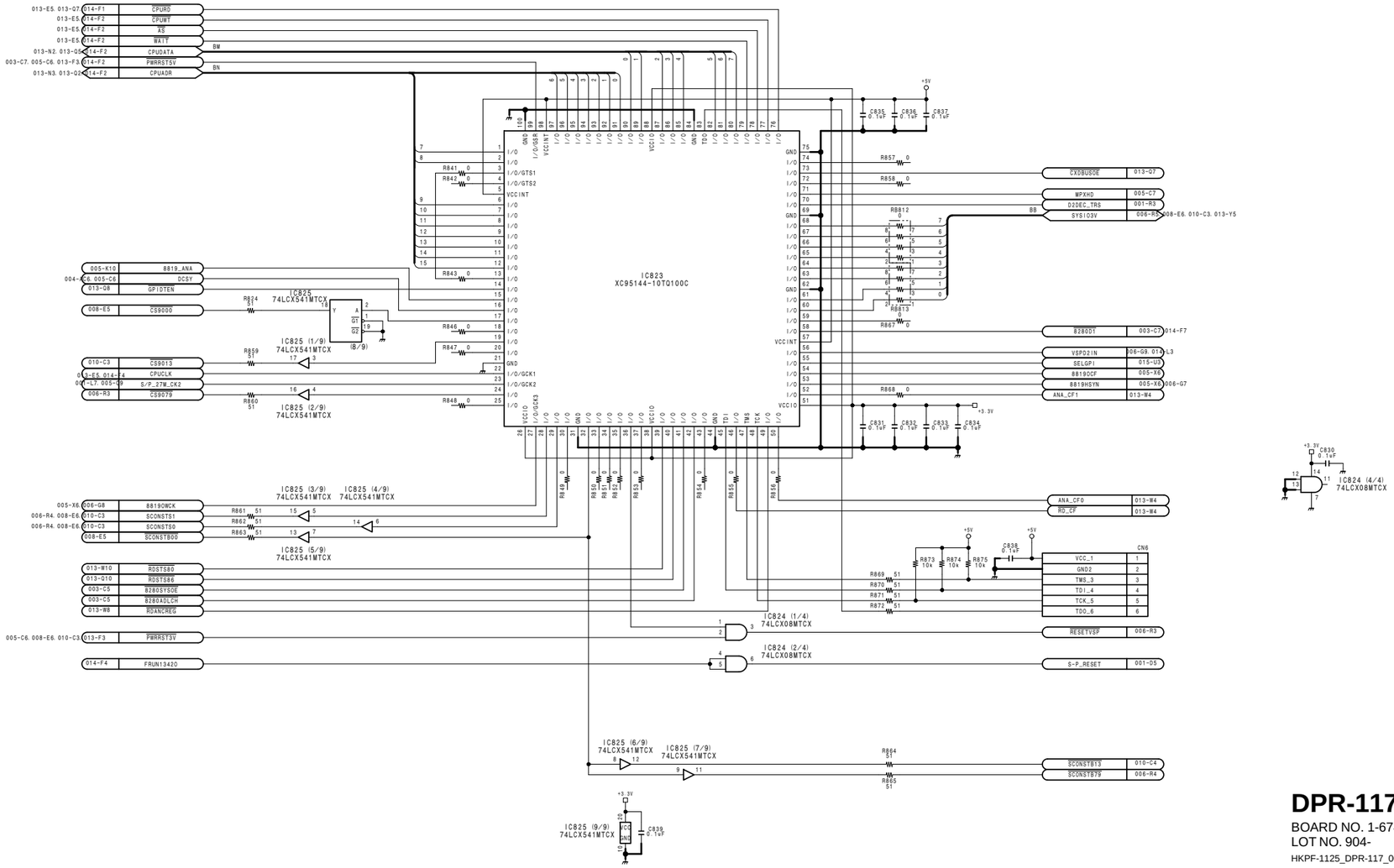
DPR-117 (14/16)

HKPF-1125 (UCJ) : S/N 10001 and Higher



8-20

DPR-117 (14/16)



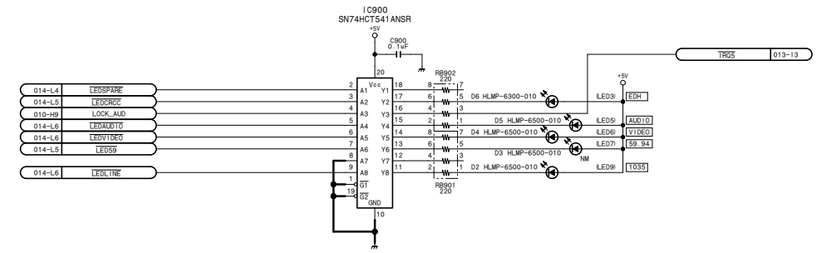
DPR-117 (14/16)

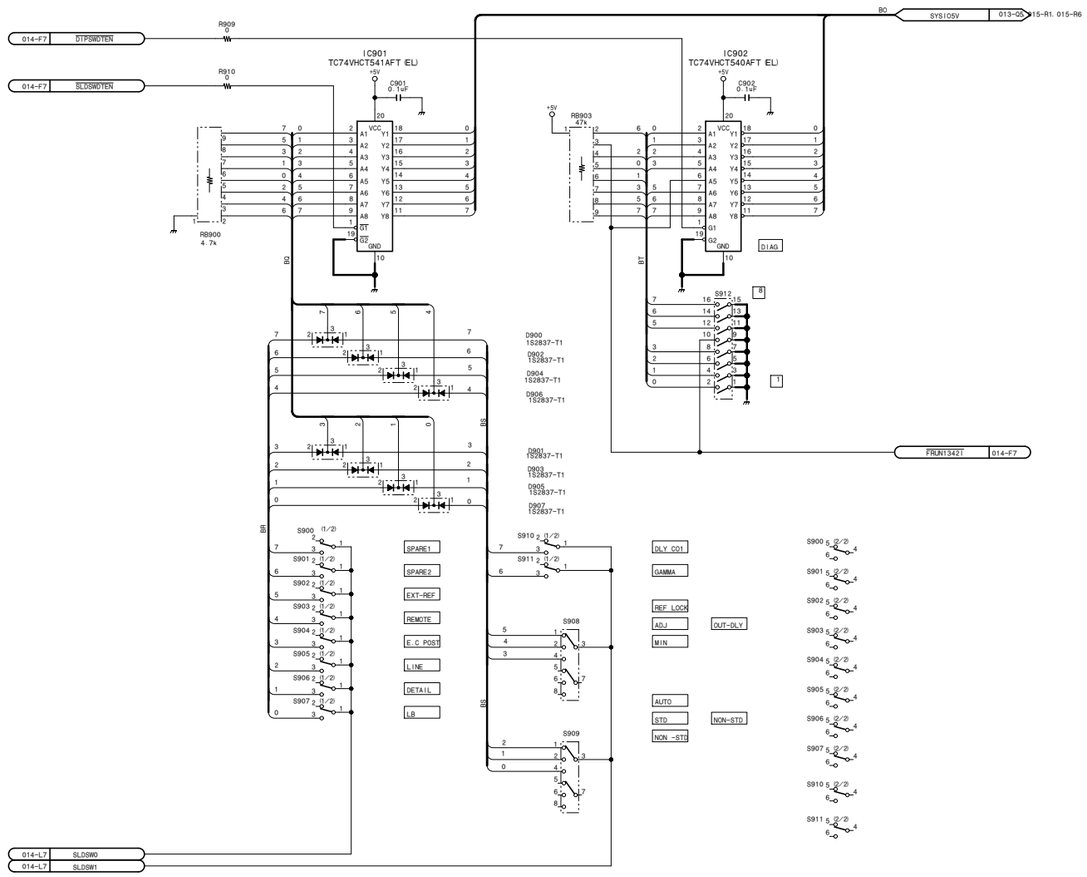
BOARD NO. 1-674-377-11
LOT NO. 904-

HKPF-1125_DPR-117_003

DPR-117 (15/16)

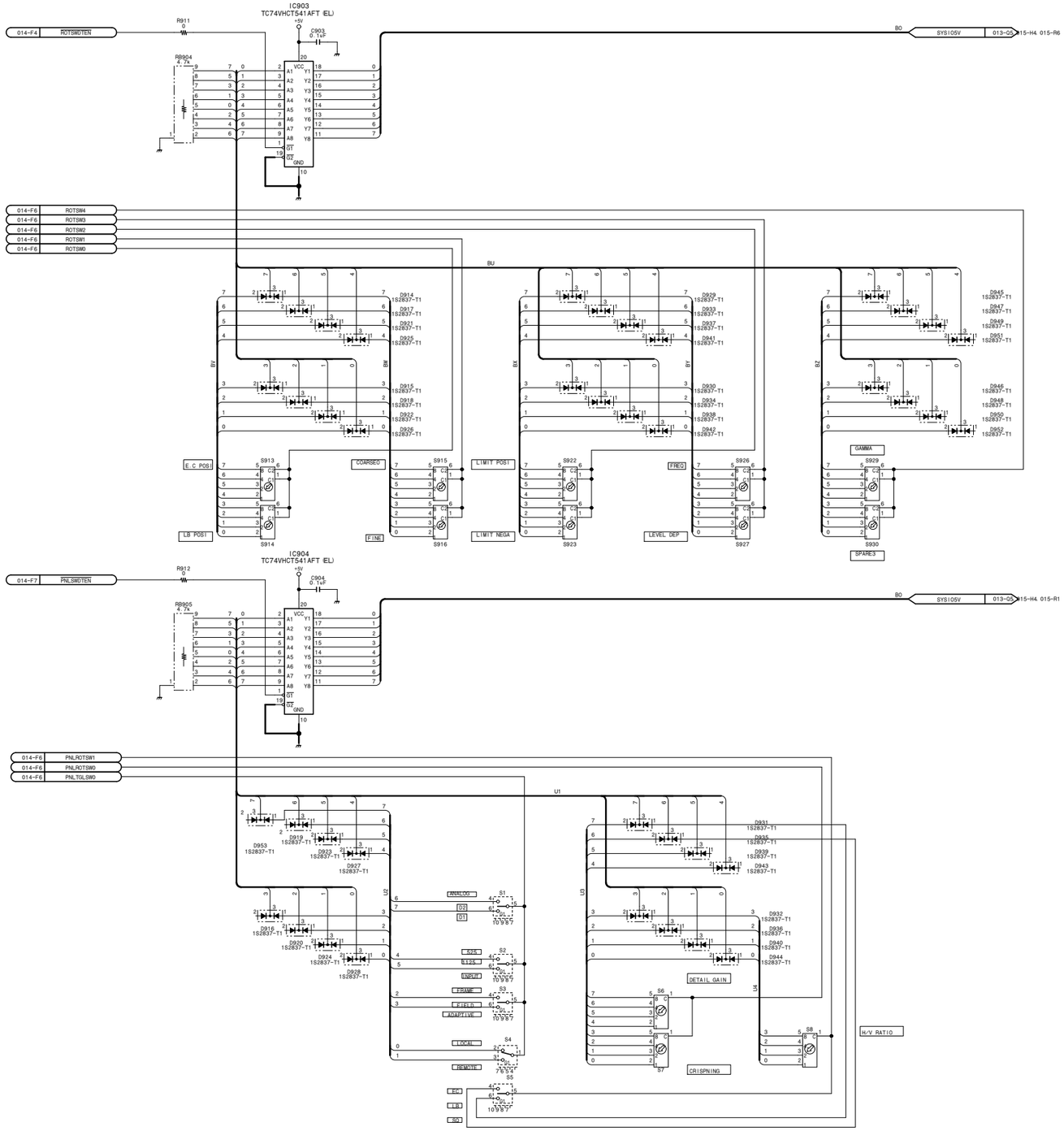
HKPF-1125 (UCJ) : S/N 10001 and Higher





8-22

DPR-117 (15/16)

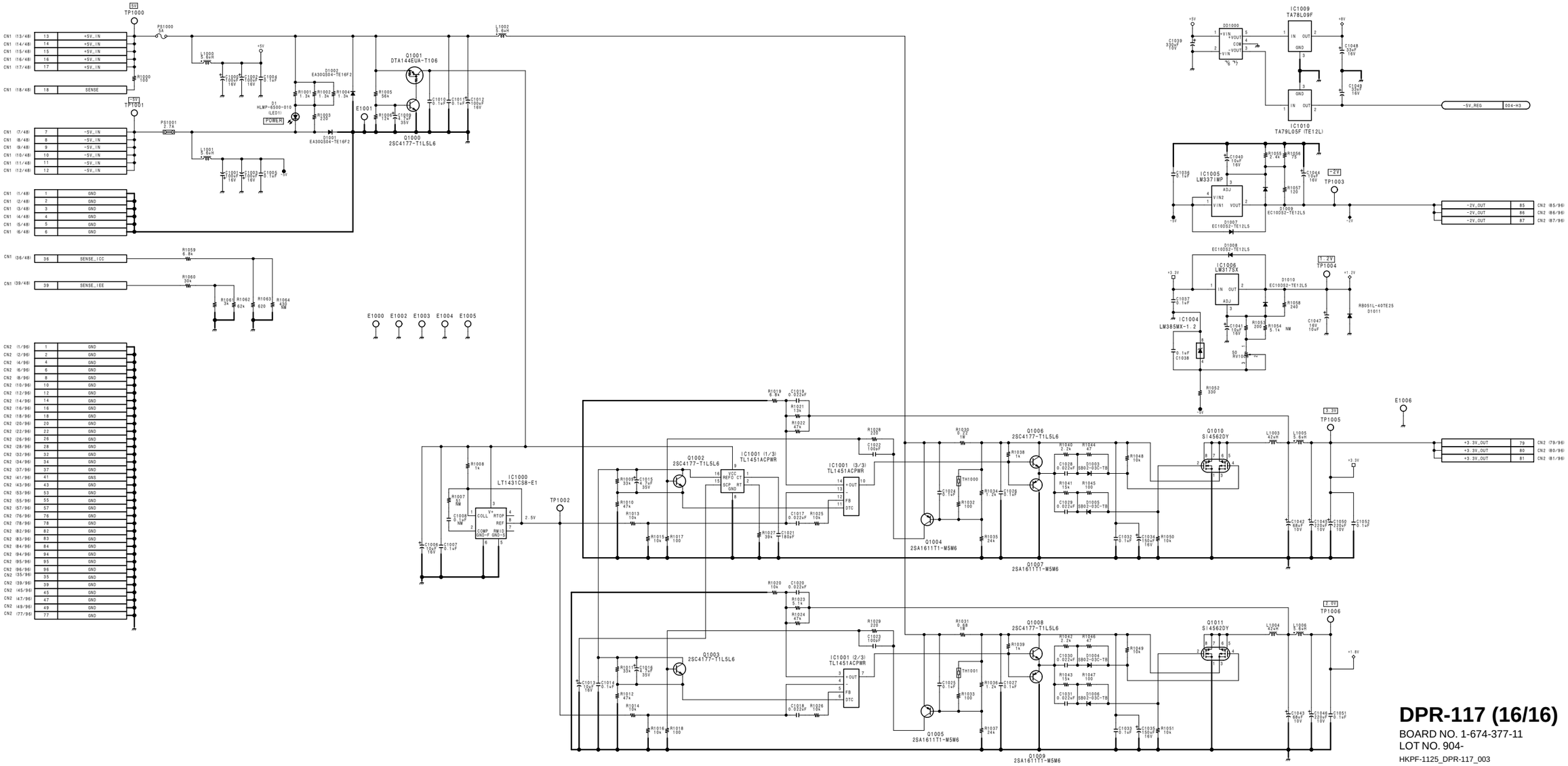


DPR-117 (15/16)

BOARD NO. 1-674-377-11
LOT NO. 904-
HKPF-1125_DPR-117_003

DPR-117 (16/16)

HKPF-1125 (UCJ) : S/N 10001 and Higher



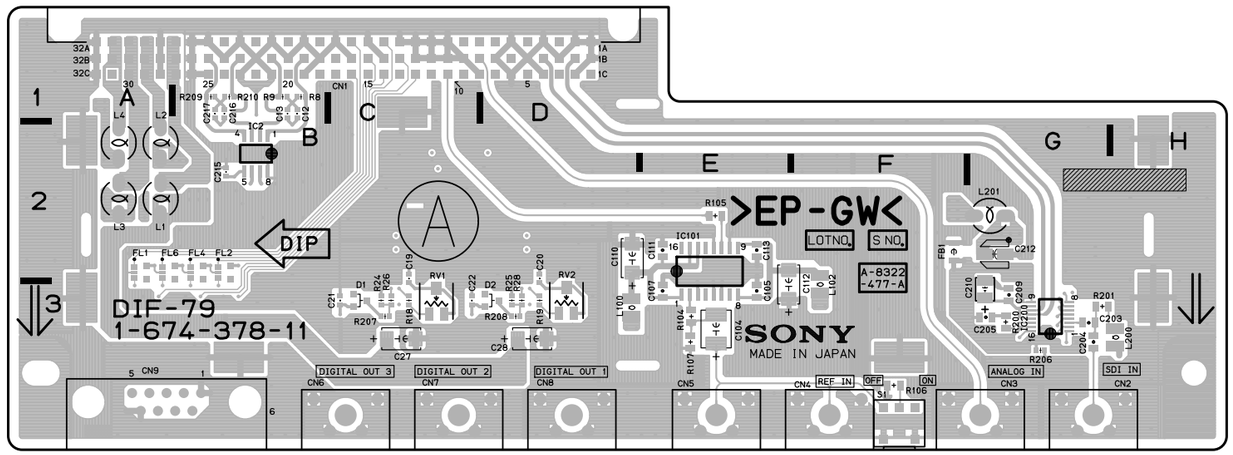
DPR-117 (16/16)

BOARD NO. 1-674-377-11
LOT NO. 904-

HKPF-1125_DPR-117_003

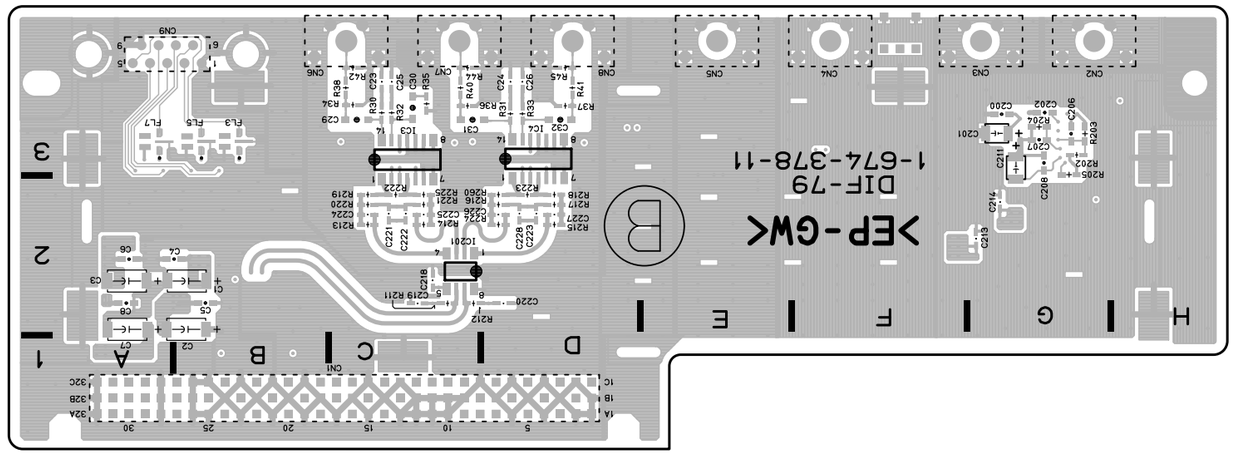
http://getMANUAL.com

Section 9
Board Layouts



HKPF-1125

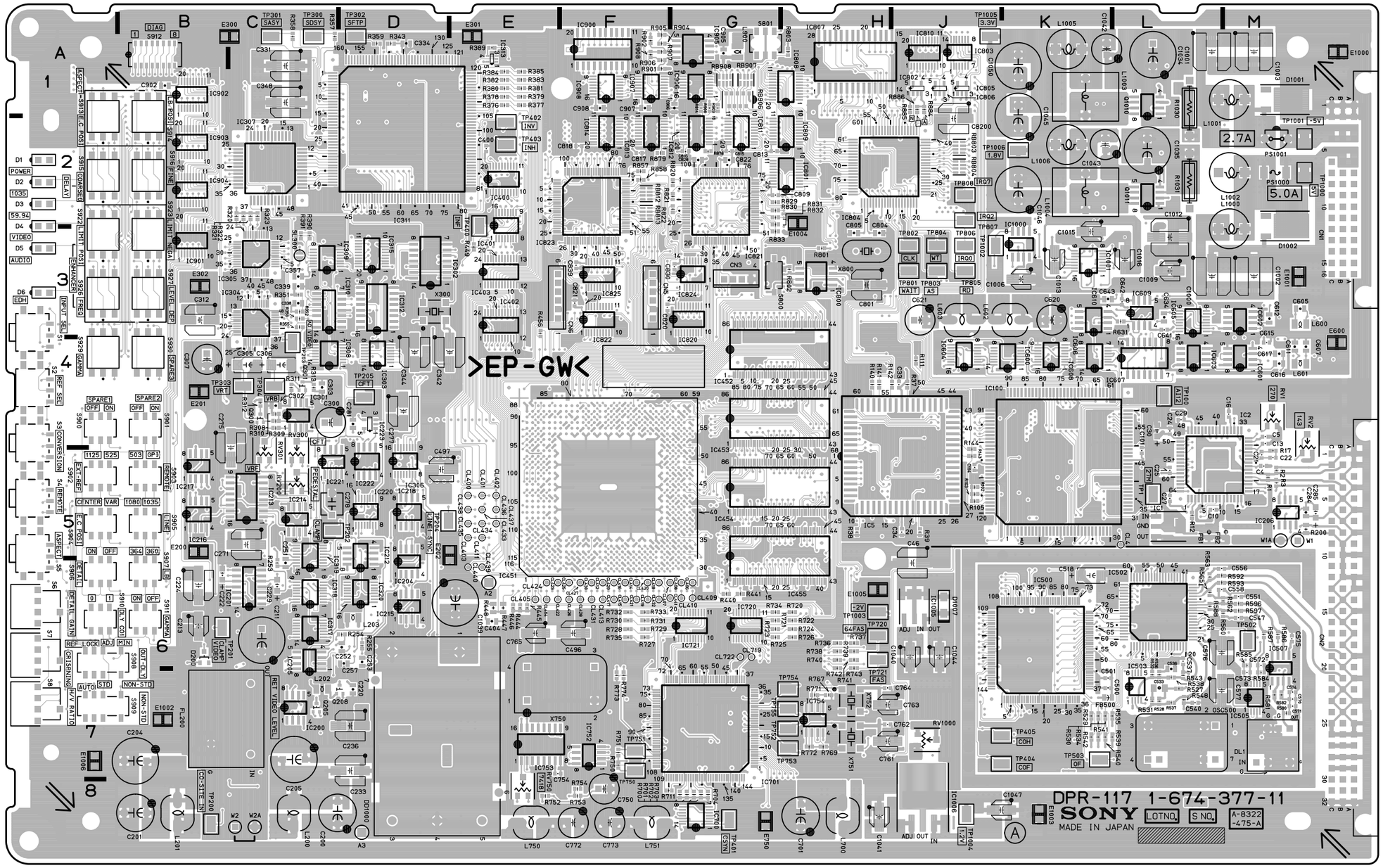
DIF-79 -A SIDE-
SUFFIX: -11



DIF-79 -B SIDE-
SUFFIX: -11

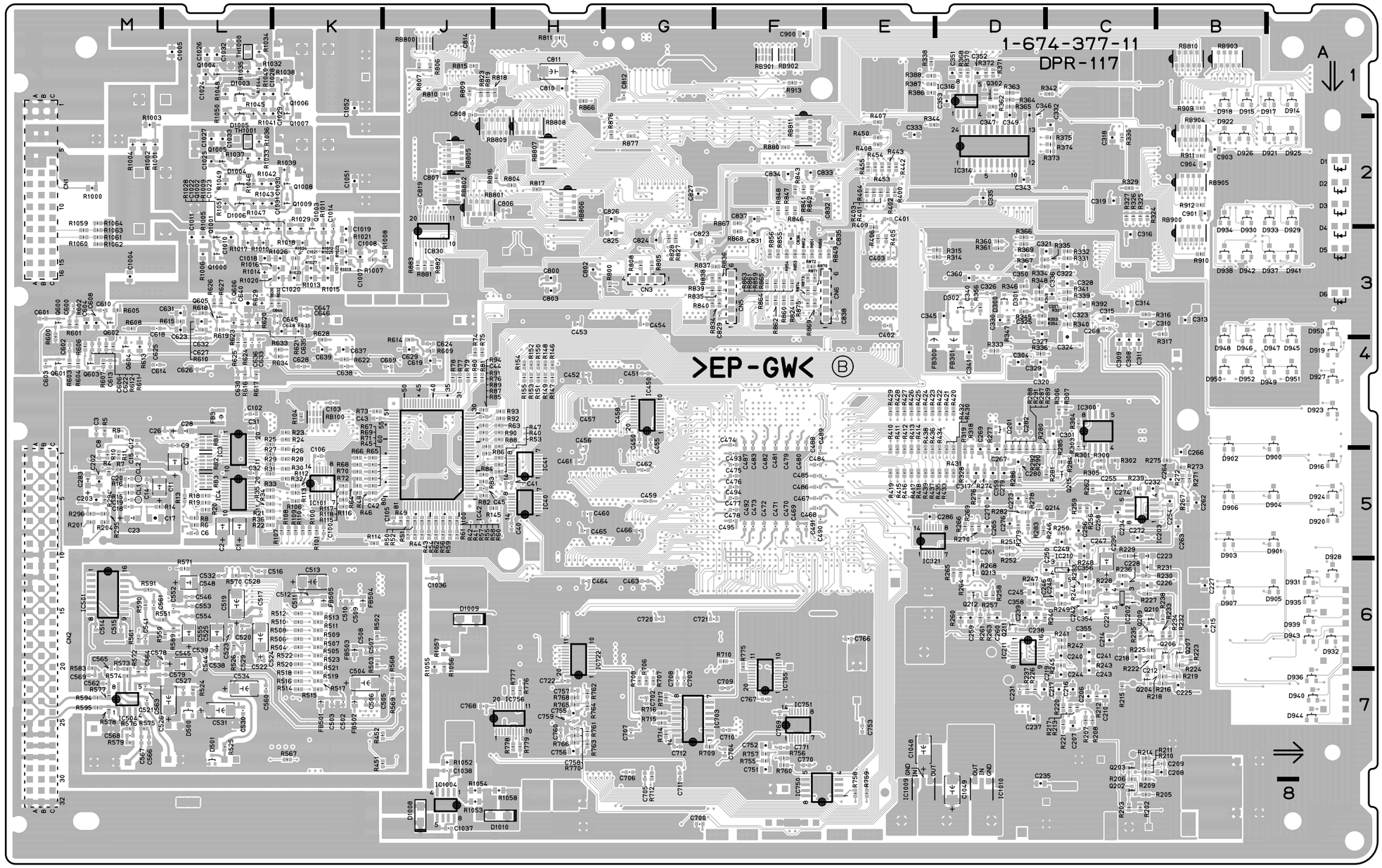
DIF-79(1-674-378-11)

C1	*B2	IC2	B2
C2	*B2	IC3	*C2
C3	*A2	IC4	*D2
C4	*B2	IC101	E3
C5	*B2	IC200	G3
C6	*A2	IC201	*C2
C7	*A2		
C8	*A2	L1	A2
C12	B1	L2	A2
C13	B1	L3	A2
C19	C2	L4	A2
C20	D2	L100	D3
C21	C3	L102	F3
C22	C3	L200	H3
C23	*C3	L201	G2
C24	*D3		
C25	*C3	R8	B1
C26	*D3	R9	B1
C27	C3	R18	C3
C28	D3	R19	D3
C29	*C3	R24	C3
C30	*C3	R25	D3
C31	*C3	R26	C3
C32	*D3	R28	D3
C104	E3	R30	*C3
C105	E3	R31	*D3
C107	E3	R32	*C3
C110	D2	R33	*D3
C111	E2	R34	*C3
C112	E3	R35	*C3
C113	E2	R36	*C3
C200	*G3	R37	*D3
C201	*G3	R38	*C3
C202	*G3	R40	*C3
C203	G3	R41	*D3
C204	G3	R42	*C3
C205	G3	R44	*C3
C206	*G3	R45	*D3
C207	*G3	R104	E3
C208	*G3	R105	E2
C209	G3	R106	F3
C210	G3	R107	E3
C211	*G3	R200	G3
C212	G2	R201	G3
C213	*G2	R202	*G3
C214	*G2	R203	*G3
C215	B2	R204	*G3
C216	B1	R205	*G3
C217	B1	R206	G3
C218	*C2	R207	C3
C219	*C2	R208	D3
C220	*D2	R209	B1
C221	*C2	R210	B1
C222	*C2	R211	*C2
C223	*D2	R212	*C2
C224	*C2	R213	*C2
C225	*C2	R214	*C2
C226	*D2	R215	*D2
C227	*D2	R216	*D2
C228	*D2	R217	*D2
		R218	*D2
CN1	C1	R219	*C2
CN2	G3	R220	*C2
CN3	G3	R221	*C2
CN4	F3	R222	*C2
CN5	E3	R223	*D2
CN6	C3	R224	*D2
CN7	C3	R225	*C2
CN8	D3	R260	*D2
CN9	A3		
		RV1	C3
D1	C3	RV2	D3
D2	D3		
		S1	F3
FB1	F2		
		*: B SIDE	
FL1	A2		
FL2	B2		
FL3	*B3		
FL4	B2		
FL5	*B3		
FL6	A2		
FL7	*A3		



HKPF-1125

DPR-117 -A SIDE-
SUFFIX: -11



DPR-117 -B SIDE-
SUFFIX: -11

DPR-117(1-674-377-11)

A2	E6	C245	*D6	C354	*C6	C537	L6	C710	*F7	C1017	*K3	D5	A3	FB503	*K6	IC754	H7	Q1005	*L2	R89	*J4	R255	D6	R354	*D3	R502	*K6	R616	*L4	R806	*J1	R1007	*K3	S2	A4
A3	D8	C246	*C6	C355	*C6	C538	*L6	C711	*G7	C1018	*L3	D6	A3	FB504	*K6	IC755	*F7	Q1006	*K1	R90	*H4	R256	*C5	R355	C3	R503	*K6	R617	*L4	R807	*J1	R1008	*J3	S3	A4
		C247	*C5	C356	*C6	C539	*L6	C712	*G7	C1019	*K3	D200	B6	FB505	*K6	IC756	*H7	Q1007	*K1	R91	*J4	R257	*D6	R356	*D3	R504	*K6	R618	*L3	R808	*G3	R1009	*K3	S4	A5
C1	*L5	C248	*C6	C357	C3	C540	L7	C720	*G6	C1020	*K3	D201	*D4			IC800	H3	Q1008	*K2	R92	*H4	R258	*D6	R357	C1	R505	*K6	R619	*L3	R809	*J1	R1010	*L3	S5	A5
C2	*L5	C249	*C5	C358	*D6	C541	*M6	C721	*G6	C1021	*K3	D300	*D3	FL200	C7	IC801	H2	Q1009	*K2	R93	*H4	R259	*C5	R358	C1	R506	*K6	R620	*L3	R810	*J1	R1011	*K3	S6	A6
C3	*M4	C250	*C6	C359	*D5	C544	*L6	C722	*H7	C1022	*L3	D301	*D3			IC802	J1	Q1010	L1	R94	*J4	R260	*D6	R359	D1	R507	*K6	R621	*L3	R811	*H1	R1012	*K3	S7	A6
C4	M5	C251	C6	C360	*D3	C545	*L6	C750	F8	C1023	*K3	D302	*D3	IC1	L5	IC803	J1	Q1011	L2	R100	*K5	R261	*D6	R360	*D3	R508	*K6	R622	*K4	R814	G1	R1013	*K3	S8	A7
C5	M4	C252	D6	C400	E2	C546	*L6	C751	*F7	C1024	*L1	D500	*L7	IC2	L5	IC804	H2			R101	*K5	R262	*C5	R361	*D3	R509	*K6	R623	*L3	R815	*J1	R1014	*L3	S800	G3
C6	*L5	C253	D6	C401	*E2	C547	M6	C752	*F7	C1025	*L2	D501	*L7	IC3	*L4	IC805	J1	R1	M5	R102	J5	R263	*D6	R362	*D1	R510	*K6	R624	*L4	R816	*H2	R1015	*K3	S801	G1
C7	*L5	C254	*B5	C402	*E3	C548	*L6	C753	*E7	C1026	*L1	D900	*A4	IC4	*L5	IC806	J1	R2	M5	R103	J5	R264	*D6	R363	*D1	R511	*K6	R625	*L4	R817	*H2	R1016	*K3	S900	A4
C8	*M5	C255	*C5	C403	*E3	C551	M6	C754	E7	C1027	*L2	D901	*A5	IC5	J5	IC807	H1	R3	M5	R104	*K4	R265	*D6	R364	*D1	R512	*K6	R626	*L3	R818	*H1	R1017	*L3	S901	B4
C9	*L4	C256	*C5	C404	E6	C552	*L6	C755	*H7	C1028	*K1	D902	*B4	IC40	*H5	IC808	H1	R4	*M5	R105	J5	R266	*D5	R365	*D1	R513	*K6	R627	*L3	R819	*J1	R1018	*K3	S902	A5
C10	L5	C257	D6	C450	*G4	C553	*L6	C756	*H7	C1029	*K1	D903	*B5	IC41	*H5	IC809	H2	R5	*M4	R106	*K5	R267	*B5	R366	*D3	R514	*K7	R628	*K4	R820	G2	R1019	*K3	S903	B5
C11	*M5	C258	*C5	C451	*G4	C554	*L6	C757	*H7	C1030	*L2	D904	*A5	IC42	*J5	IC810	J1	R6	*L5	R107	*K5	R268	*D6	R367	*D3	R515	*K7	R629	*L3	R821	G2	R1020	*K3	S904	A5
C12	*M4	C259	*D6	C452	*H4	C555	*L6	C758	*H7	C1031	*L2	D905	*A6	IC100	K5	IC811	G2	R7	*M5	R108	*K5	R269	*D5	R368	*D1	R516	*K7	R630	*L3	R822	G2	R1021	*K3	S905	B5
C13	M4	C260	*D6	C453	*H3	C556	L6	C759	*H7	C1032	*L1	D906	*B5	IC101	*K5	IC812	G2	R8	*L5	R109	*K5	R270	*D5	R369	*D3	R517	*K7	R631	L3	R823	*J1	R1022	*K3	S906	A6
C14	*M5	C261	*D5	C454	*G3	C558	L6	C760	*H7	C1033	*L2	D907	*B6	IC200	C7	IC813	F2	R9	*M4	R110	*K5	R271	*B5	R370	*D1	R518	*K7	R632	*K3	R824	*F3	R1023	*K3	S907	B6
C15	*M5	C262	*B5	C455	*G4	C560	*L7	C761	H7	C1034	L1	D914	*A1	IC201	C6	IC814	F2	R10	*M5	R111	J4	R272	*B5	R371	*D1	R519	*K7	R633	*K4	R827	*G3	R1024	*K3	S908	A6
C16	M4	C263	*B5	C456	*H4	C561	*M6	C762	H7	C1035	L2	D915	*B1	IC202	*C6	IC820	G3	R11	*M5	R112	*K5	R273	*B5	R372	*D1	R520	*K6	R634	*K4	R828	*G3	R1025	*K3	S909	A7
C17	*M5	C264	*B5	C457	*H4	C562	*M7	C763	H7	C1036	*J6	D916	*A5	IC203	*C5	IC821	G2	R12	L5	R113	*K5	R274	*D5	R373	*C2	R521	*K6	R635	*K3	R829	G2	R1026	*K3	S910	A6
C18	*M5	C265	*D5	C458	*G4	C563	*M7	C764	H7	C1037	*J8	D917	*A1	IC204	D6	IC822	F3	R13	*L5	R114	*K5	R275	*B5	R374	*C2	R522	*K6	R700	G8	R830	G2	R1027	*K3	S911	B6
C19	*M5	C266	*B5	C459	*G5	C564	*M7	C765	E6	C1038	*J7	D918	*B1	IC205	C7	IC823	F2	R14	*M5	R115	*K5	R276	*D5	R375	*C2	R523	*K6	R701	G8	R831	G2	R1028	*L3	S912	B1
C20	*M5	C267	*D5	C460	*H5	C565	*M7	C766	*E6	C1039	E6	D919	*A4	IC206	M5	IC824	G3	R15	*M5	R116	*K5	R277	*D5	R376	E1	R524	*L7	R702	G8	R832	G2	R1029	*K3	S913	A2
C21	M5	C268	*C3	C461	*H5	C566	*M7	C767	*F7	C1040	J6	D920	*A5	IC210	*C6	IC825	F3	R16	*M5	R117	*K5	R278	*D5	R377	E1	R525	*L7	R703	G8	R833	G3	R1030	L1	S914	B2
C22	M5	C269	*D5	C462	*G5	C567	*M7	C768	*J7	C1041	H8	D921	*A2	IC211	*D6	IC830	*J3	R17	M5	R118	*K5	R279	*D5	R378	E1	R526	*L6	R704	G8	R834	*F3	R1031	L2	S915	A2
C23	*M5	C270	*D5	C463	*G6	C568	*M7	C769	*F7	C1042	K1	D922	*B2	IC212	D6	IC900	F1	R18	*L5	R140	H4	R280	*C5	R379	E1	R527	L7	R706	*G7	R835	*F3	R1032	*L1	S916	B2
C24	L4	C271	C5	C464	*H6	C569	*M7	C770	*F7	C1043	K2	D923	*A4	IC213	C5	IC901	B3	R19	*L5	R141	H4	R281	*C5	R380	E1	R528	L7	R707	*G7	R836	*F3	R1033	*L2	S922	A3
C25	L5	C272	*C5	C465	*H5	C570	M7	C771	*F7	C1044	J6	D924	*A5	IC214	C5	IC902	B1	R20	*L5	R142	J4	R282	*D5	R381	E1	R529	K7	R708	*G7	R837	*F3	R1034	*L1	S923	B3
C26	*L4	C273	*D5	C466	*G5	C571	M7	C772	F8	C1045	K2	D925	*A2	IC215	D6	IC903	B2	R21	*L5	R143	J5	R283	*D5	R382	E1	R530	K7	R709	*G7	R838	*G3	R1035	*L1	S926	A3
C27	L5	C274	*C5	C467	*F5	C572	M6	C773	F8	C1046	K2	D926	*B2	IC216	B5	IC904	B2	R22	*L5	R144	J5	R284	*C5	R383	E1	R531	L7	R710	*F6	R839	*G3	R1036	*L2	S927	B3
C28	*L4	C275	C5	C468	*F5	C573	M7	C800	*H3	C1047	J8	D927	*A4	IC217	B5	IC905	G1	R23	*K4	R145	*H5	R285	*C5	R384	E1	R532	L7	R711	F8	R840	*G3	R1037	*L2	S929	A4
C29	L4	C276	*D5	C469	*F5	C574	M7	C801	H3	C1048	*E7	D928	*A6	IC218	D5	IC906	G1	R24	*K4	R146	*H4	R286	*D5	R385	E1	R534	K7	R712	*G7	R841	*F2	R1038	*K1	S930	B4
C30	L4	C277	D4	C470	*F5	C575	M6	C802	*H3	C1049	*D8	D929	*A2	IC220	D5	IC907	F1	R25	*L4	R147	*H4	R287	*D5	R386	*E1	R535	L7	R714	*G7	R842	*F2	R1039	*K2		
C31	*L4	C278	C5	C471	*F5	C576	L6	C803	*H3	C1050	K1	D930	*B2	IC221	C5	IC908	F1	R26	*K5	R148	*H4	R288	*D5	R387	*E1	R536	L7	R715	*G7	R843	*F2	R1040	*L1	SL300	C3
C32	*L5	C279	*D5	C472	*F5	C577	L7	C804	H3	C1051	*K2	D931	*A6	IC222	D5	IC1000	K3	R27	*L5	R149	*H4	R289	*D5	R388	*E1	R537	L7	R716	*G7	R846	*F2	R1041	*L1		
C33	J4	C280	*D5	C473	*F5	C578	*L6	C805	H3	C1052	*K1	D932	*A6	IC223	D4	IC1001	K3	R28	*K5	R150	*H4	R290	*D5	R389	E1	R538	L7	R717	*G7	R847	*F2	R1042	*L2	TH1000	*L1
C34	J5	C281	D4	C474	*F4	C579	*L7	C806	*H2	C8200	J2	D933	*A2	IC300	*C5	IC1004	*J8	R29	*L5	R151	*H4	R291	*D5	R390	C3	R539	L7	R720	H6	R848	*F2	R1043	*L2	TH1001	*L2
C40	*H5	C282	*D4	C475	*F5	C600	*M3	C807	*J2			D934	*B2	IC301	C4	IC1005	J6	R30	*K5	R152	*H4	R292	*D5	R391	C3	R540	K7	R721	G6	R849	*E3	R1044	*L1		
C41	*H5	C283	*M5	C476	*F5	C601	*M3	C808	*J1	CL1	*M5	D935	*A6	IC302	D3	IC1006	J8	R31	*L5	R153	*H4	R293	*C6	R392	*C3	R541	K7	R722	H6	R850	*F3	R1045	*L1	TP1	L5
C42	*K5	C284	M5	C477	*F5	C602	*M4	C809	G2	CL2	*M5	D936	*A7	IC303	D4	IC1009	*E8	R32	*K5	R154	*H4	R294	*M5	R400	*E2	R542	K7	R723	G6	R851	*F3	R1046	*L2	TP100	L4
C43	*K4	C285	M5	C478	*F5	C603	*M4	C810	*H1	CL4	L5	D937	*A3	IC304	C3	IC1010	*D8	R33	*L5	R155	*H4	R295	*M5	R401	*E2	R543	L7	R724	H6	R852	*F3	R1047	*L2	TP200	B8
C44	*J4	C286	*E5	C479	*F4	C604	*M3	C811	*H1	CL400	E5	D938	*B3	IC305	C3			R34	*L5	R200	M5	R296	*M5	R402	*E2	R548	L7	R725	G6	R853	*F3	R1048	*L1	TP201	B6
C45	*J5	C300	C4	C480	*F4	C605	M3	C812	*G1	CL401	E5	D939	*A6	IC306	D5	L200	C8	R35	*L5	R201	*M5	R300	*C5	R403	*E2	R550	*L6	R726	H6	R854	*F3	R1049	*L2	TP202	C5
C46	J6	C301	*C4	C481	*F4	C606	*M4	C813	G2	CL402	E5	D940	*A7	IC307	C2	L201	B8	R36	*L5	R202	*C8	R301	*C5	R404	*E2	R551	*L6	R727	F6	R855	*F3	R1050	*L1	TP203	C4
C100	*K5	C302	C4	C482	*F4	C607	M4	C814	*J1	CL403	E5	D941	*A3	IC308	D4	L202	C7	R37	J4	R203	*C8	R302	*C5	R405	*E3	R560	M6	R728	F6	R856	*F3	R1051	*L2	TP204	D5
C101	L5	C303	C4	C483	*F4	C608	*M3	C815	G2	CL404	E6	D942	*B3	IC309	D3	L203	D6	R38	H5	R204	*M5	R303	*C4	R406	*E3	R561	*M6	R729	F6	R857	F2	R1052	*J7	TP205	D4
C102	*L4	C304	*D4	C484	*F5	C609	*J4	C816	G2	CL405	E6	D943	*A6	IC310	D3	L600	M3	R39	J5	R205	*C8	R304	*C4	R407	*E2	R562	M6	R730	F6	R858	F2	R1053	*J8	TP300	C1
C103	*K4	C305	C4	C485	*F5	C610	*M3	C817	F2	CL406	G6	D944	*A7	IC311	D2	L601	M4	R40	*H5	R206	*C8	R305	*C5	R408	*E2	R563	L6	R731	F6	R859	*F3	R1054	*J8	TP301	C1
C104	J5	C306	C4	C486	*F5	C611	M4	C818	F2	CL407	G6	D945	*A3	IC312	D3	L602	K3	R41	*J5	R207	*C7	R306	*C4	R409	*E3	R565	L6	R732	F6	R860	*F3	R1055	*J6	TP302	D1
C105	*J5	C307	B4	C487	*F4	C612	M3	C819	*J2	CL408	G6	D946	*B3	IC313	E1	L603	J3	R42	*J5	R208	*C7	R307	*C4	R410	*E5	R567	*K7	R733	F6	R861	*F3	R1056	*J6	TP303	C4
C106	*K5	C308	*C4	C488	*F4	C613	*M4	C820	F3	CL409	G6	D947	*A3	IC314	*D2	L700	H8	R43	*J5	R209	*C8	R308	C4	R411	*E5	R568	*J7	R734	G6	R862	*F3	R1057	*J6	TP304	C4
C200	C8	C309	*C4	C489	*F5	C614	*M4	C821	F3	CL410	G6	D948	*B3	IC315	D3	L750	E8	R44	*J5	R210	*C7	R309	C4	R412	*E5	R569	*J7	R735	F6	R863	*F3	R1058	*H8	TP400	E2
C201	B8	C310	*C3	C490	*F5	C615	M4	C822	G2	CL411	E5	D949	*A4	IC316	*D1	L751	F8	R45	*K5	R211	*C7	R310	C4	R413	*E5	R570	*L6	R736	H6	R864	*F3	R1059	*M3	TP401	G8
C202	*M5	C311	*C4	C491	*F5	C616	M4	C823	*G3	CL412	F6	D950	*B4	IC317	C6	L900	G1	R46	*K5	R212	*C7	R311	C4	R414	*E5	R571	*L6	R737	H6	R865	*F3	R1060	*M3	TP402	E2
C203	*M5	C312	B3	C492	*F5	C617	M4	C824	*G3	CL413	F6	D951	*A4	IC318	C6	L1000	M3	R47	*H5	R213	*C7	R312	C4	R415	*E5	R572	*M7	R738	H6	R866	*H1	R1061	*M3	TP403	E2
C204	B7	C313	*B3	C493	*F5	C618	*M3	C825	*G3	CL414	F6	D952	*B4	IC319	C6	L1001	M1	R48	*K5	R214	*C7	R313	C4	R416	*E5	R573	*M7	R739	H6	R867	*F2	R1062	*M3	TP404	J7
C205	C7	C314	*C3	C494	*F5	C619	*J4	C826	*G2	CL415	F6	D953	*A3	IC320	D6	L1002	M2	R49	*J5	R215	*C7	R314	*D3	R417	*E5	R574	*M7	R740	H6	R868	*F3	R1063	*M3	TP405	J7
C206	*C7	C315	*C3	C495	*F5	C620	K3	C827	*G2	CL416	F6	D1001	M1	IC321	*E5	L1003	K1	R50	*J5	R216	*B7	R315	*D3	R418	*E5	R575	*M7	R741	H6	R869	*F3	R1064	*M2	TP502	M6
C207	*C7	C316	*C3	C496	F6	C621	J3	C828	G2	CL417	F6	D1002	M2	IC400	E2	L1004	K2	R51	*J5	R217	*C7	R316	*C3	R419	*E5	R576	*M7	R742	H6	R870	*F3			TP503	K7
C208	*B7	C317	*D5	C497	D5	C622	*M4	C829	*F3	CL418	F6	D1003	*L1	IC401	E3	L1005	K1	R52	*J5	R218	*B7	R317	*B3	R420	*D4	R577	*M7	R743	H6	R871	*F3	RB1	*L4	TP720	H6
C209	*B7	C318	*C2	C500	K7	C623	*L3	C830	G3	CL419	F6	D1004	*L2	IC402	E4	L1006	K2	R53	*H5	R219	*B7	R318	*D5	R421	*D4	R578	*M7	R750	F7	R872	*F3	RB2	*L5	TP721	H6
C210	*C7	C319	*C2	C501	K7	C624	*J4	C831	*F3	CL420	F6	D1005	*L1	IC403	E3			R54	*J5	R220	*C7	R319	*D5	R422	*D4	R579	*M7	R751	F7	R873	*F3	RB3	*L5	TP750	F7
C211	C6	C320	*D4	C502	*K7	C625	*M4	C832	*F3	CL421	F6	D1006	*L2	IC450	*G4	OSC500	L7	R55	*J5	R221	*C7	R320	C2	R423	*E4	R580	M7	R752	E8	R874	*F3	RB100	*K4	TP751	F7
C212	*B6	C321	*C3	C503	*K7	C626	*L4	C833	*E3	CL422	E6	D1007	J6	IC451	F5			R56	*J5	R222	*C6	R321	C2	R424	*E4	R581	M7	R753	F8	R875	*F3	RB800	*J1	TP752	H7
C213	B6	C322	*C3	C504	*K7	C627	*L3	C834	*F2	CL423	E6	D1008	*J8	IC452	G4	PS1000	M2	R57	*J5	R223	*B6	R322	C2	R425	*E4	R582	M7	R754	F8	R876	*G2	RB801	*J2	TP753	H7
C214	*C6	C323	*C3	C505	*K7	C628	*K4	C835	*E2	CL424	E6	D1009	*J6	IC453	G4	PS1001	M2	R58	*J5	R224	*B6	R323	C2	R426	*E4	R583	*M6	R755	*F7	R877	*G2	RB802	*J2	TP754	H7
C215	*B6	C324	*C4	C506	*K7	C629	*J4	C836	*F2	CL425	F6	D1010	*H8	IC454	G5			R59	*J5	R225	*C6	R324	*C2	R427	*E4	R584	M7	R756	*F7	R878	G2	RB803	J2	TP755	H7
C216	*C7	C325	*D3	C507	*K6	C630	*L4	C837	*F2	CL426	F6			IC455	G6	Q202	*C8	R60	*J5	R226	*D7	R325	*C2	R428	*E4	R585	M6	R757	*F7	R879	F2	RB804	J2	TP801	J3
C217	*C7	C326	*D3	C508	*K6	C631	*L3	C838	*E3	CL427	F6	DD1000	D7	IC500	K6	Q203	*C7	R61	*J5	R227	*C6	R326	*C2	R429	*E4	R586	M6	R758	*E8	R880	*F2	RB805	*J2	TP802	J3
C218	*C6	C327	*D3	C509	*K6	C632	*L4	C839	F3	CL428	F6			IC501	*M6	Q204	*C7	R62	*J5	R228	*C6	R327	*C2	R430	*D5	R587	M6	R759	*E8	R881	*J3	RB806	*H2	TP803	J3
C219	*D7	C328	*C3	C510	*K6	C633	*L4	C900	*F1	CL429	F6	DL1	M7	IC502	L6	Q205	C7	R63	*H4	R229	*C5	R328	*D5	R431	*D5	R588	L6	R760	*F7	R882	*J3	RB807	*H2	TP804	J3
C220	D7	C329	*D4	C511	*K6	C634	L3	C901	*B2	CL430	F6			IC503	L7	Q206	*B6	R64	*K5	R230	*C6	R329	*C2	R432	*D5	R589	*L6	R761	*H7	R883	*J3	RB808	*H2	TP805	J3
C221	*C6	C330	*D3	C512	*K6	C635	*L3	C902	B1	CL431	F6	E200	B5	IC504	*M7	Q207	*B6	R65	*K5	R231	*C6	R330	*C2	R433	*D5	R590	*M6	R762	*H7	R884	J1	RB809	*H2	TP806	J3
C222	B6	C331	C1	C513	*K6	C636	*L4	C903	*B2	CL432	F6	E201	B4	IC505	M7	Q208	D7	R66	*K5	R232	*B6	R331	*C3	R434	*D5	R591	*M6	R763	*H7	R885	J1	RB810	*B1	TP807	J2
C223	*C5	C332	*C2	C514	*M6	C637	*K4	C904	*B2	CL433	E5	E202	E5	IC507	M7	Q209	*C6	R67	*K5	R233	*B6	R332	*C3	R435	*D5	R592	L6	R764	*H7	R886	J1	RB811	*F2	TP808	J2
C224	B6	C333	*E2	C515	*M6	C638	*K4	C905	G1	CL434	E5	E300	C1	IC600	K4	Q210	*C6	R68	*K5	R234	*B6	R333	*D4	R436	*E5	R593	L6	R765	*H7	R900	G1	RB812	F2	TP1000	M2
C225	*B7	C334	D1	C516	*L6	C639	*K4	C906	G1	CL435	E5	E301	E1	IC601	M4	Q211	*D6	R69	*K5	R235	*C6	R334	*D3	R437	*E5	R594	*M7	R766	*H7	R901	F1	RB813	F2	TP1001	M2
C226	*C6	C335	*D2	C517	*L6	C640	*L3	C907	F1	CL436	E5	E302	B3	IC602	M3	Q212	*D6	R70	*K5	R236	*C6	R335	*D3	R438	*E5	R595	*M7	R767	H7	R902	F1	RB900	*B3	TP1002	J3
C227	*B6	C336	*C3	C518	K6	C641	L3	C908	F1	CL437	E5	E600	M4	IC603	L4	Q213	*D6	R71	*K5	R237	*D7	R336	*D4	R439	*E5	R596	M6	R768	*H7	R903	G1	RB901	*F1	TP1003	H6
C228	*C6	C337	*D3	C519	*L6	C642	L3	C1000	L3	CL438	E5	E750	G8	IC604	J4	Q214	*D5	R72	*K5	R238	*B6	R337	*C3	R440	G6	R597	M6	R769	H7	R904	F1	RB902	*F1	TP1004	J8
C229	C6	C338	C3	C520	*L6	C643	K3	C1001	L1	CL439	E6	E1000	M1	IC605	L3	Q215	*C5	R73	*K4	R239	*C5	R338	*E1	R441	G6	R600	*M4	R770	*H7	R905	F1	RB903	*B1	TP1005	J1
C230	*C6	C339	C3	C521	*M7	C644	*K3	C1002	M3	CL440	E6	E1001	M3	IC606	K4	Q300	C4	R74	*J4	R240	*D6	R339	*C3	R442	*E2	R601	*M3	R771	H7	R906	F1	RB904	*B2	TP1006	K2
C231	*D7	C340	*D3	C522	*L6	C645	*K3	C1003	M1	CL441	G6	E1002	B7	IC607	L4	Q301	C4	R75	*J4	R241	*C6	R340	*C3	R443	*E2	R602	*M3	R772	H7	R907	F1	RB905	*B2		
C232	*C5	C341	*D4	C523	*L6	C646	*K3	C1004	*M3	CL719	G6	E1003	K8	IC608	K4	Q302	*D1	R76	*J4	R242	*C6	R341	*C3	R444	E6	R603	*M4	R773	F7	R908	F1	RB906	G1	X300	D3
C233	D7	C342	E4	C524	*L6	C647	*K3	C1005	*L1	CL722	G6	E1004	H2	IC609	L3	Q600	*M3	R77	*J4	R243	*C6	R342	*C1	R445	E6	R604	*M4	R774	F7	R909	*B1	RB907	G1	X750	F7
C234	*C5	C343	*D2	C525	*L6	C648	*K3	C1006	K3			E1005	H6	IC610	K3	Q601	*M4	R78	*J4	R244	*C6	R343	D1	R446	E6	R605	*M3	R775	*F6	R910	*B3	RB908	G1	X751	H7
C235	*D8	C344	D4	C526	*L7	C700	*G8	C1007	*K3	CN1	M2	E1006	A7	IC700	G8	Q602	*M3	R79	*J4	R245	*C6	R344	*E2	R447	E6	R606	*M4	R776	*H7	R911	*B2			X752	H7
C236	D7	C345	*D3	C527	*L7	C701	H8	C1008	*K3	CN2	M6			IC701	G7	Q603	*M4	R80	*J4	R246	*D5	R345	*D3	R448	E6	R607	*M4	R777	*H7	R912	*B2	RV1	M4	X800	H3
C237	*D7	C346	*D1	C528	*L6	C702	*G7	C1009	L3	CN3	G3	FB1	L5	IC703	*G7	Q604	*M4	R81	*J4	R247	*D6	R346	*D3	R449	E3	R608	*M3	R778	*H7	R913	*F1	RV2	M4		
C238	*D6	C347	*D1	C529	*L6	C703	*G7	C1010	*L3	CN5	F3	FB2	M5	IC720	G6	Q605	*L3	R82	*J5	R248	*C5	R347	*D3	R450	*E2	R609	*J4	R779	*H7	R1000	*M2	RV200	C5	*: B SIDE	
C239	*D6	C348	C1	C530	*L7	C704	*F7	C1011	*L3	CN6	E3	FB3	*L4	IC721	G6	Q606	*L3	R83	*J5	R249	*C6	R348	*D3	R451	*J7	R610	*L3	R800	*G3	R1001	*M2	RV300	C5		
C240	*C6	C349	*D1	C531	*L7	C705	*G7	C1012	L3			FB300	*E4	IC722	*H7	Q1000	*L3	R84	*J5	R250	*C5	R349	*D3	R452	*J7	R611	*M4	R801	H3	R1002	*M2	RV301	C5		
C241	*C6	C350	*D3	C532	*L6	C706	*G7	C1013	K3	D1	A2	FB301	*D4	IC750	*E8	Q1001	*L3	R85	*J5	R251	*D5	R350	C3	R453	*E2	R612	*M4	R802	H3	R1003	*M2	RV750	E8		
C242	*C6	C351	*D1	C533	L7	C707	*G7	C1014	*K3	D2	A2	FB500	K7	IC751	*F7	Q1002	*L3	R86	*H4	R252	*D5	R351	C3	R454	*E2	R613	*M4	R803	H1	R1004	*M2	RV1000	J7		
C243	*C7	C352	*D1	C534	*L7	C708	*G7	C1015	K3	D3	A2	FB501	*K7	IC752	F7	Q1003	*K3	R87	*J4	R253	C6	R352	C3	R455	*E2	R614	*J4	R804	*H2	R1005	*L3				
C244	*C7	C353	*D1	C536	L7	C709	*F7	C1016	L3	D4	A2	FB502	*K7	IC753	E7	Q1004	*L1	R88	*H4	R254	D6	R353	*D3	R456	E3	R615	*L3	R805	*G3	R1006	*L3	S1	A3		

このマニュアルに記載されている事柄の著作権は当社にあります。
従って，当社の許可なしに無断で複写したり，説明内容（操作，保守等）と異なる目的で本マニュアルを使用することを禁止します。

The material contained in this manual consists of information that is the property of Sony Corporation.
Sony Corporation expressly prohibits the duplication of any portion of this manual or the use thereof for any purpose other than the operation or maintenance of the equipment described in this manual without the express written permission of Sony Corporation.

Le matériel contenu dans ce manuel consiste en informations qui sont la propriété de Sony Corporation.
Sony Corporation interdit formellement la copie de quelque partie que ce soit de ce manuel ou son emploi pour tout autre but que des opérations ou entretiens de l’équipement à moins d’une permission écrite de Sony Corporation.

Das in dieser Anleitung enthaltene Material besteht aus Informationen, die Eigentum der Sony Corporation sind.
Die Sony Corporation untersagt ausdrücklich die Vervielfältigung jeglicher Teile dieser Anleitung oder den Gebrauch derselben für irgendeinen anderen Zweck als die Bedienung oder Wartung der in dieser Anleitung beschriebenen Ausrüstung ohne ausdrückliche schriftliche Erlaubnis der Sony Corporation.

HKPF-1125 (UCJ) J, E
3-202-759-01

Sony Corporation
Broadcasting & Professional Systems Company

Printed in Japan
1999. 6 08
©1999